

REPORT OF 040503

last update on Mon May 3 15:13:16 GMT 2004

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1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P), global monitoring products (ASA_GM1_1P), which are the available few hours after the acquisition, on the browse (BP) products and on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

ASAR back in operation from heater/refuse due to all PSUs of tile C2 reported off.
Unavailable from 02-MAY-2004 21:32:47 to 03-MAY-2004 09:41:44

2.2 - Browse Visual Inspection

No anomalies observed on available browse products

2.3 - Data Analysis

- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

3 - Module Stepping Mode

The MS mode provides an internal health check on an individual module basis. The purpose of this mode is to identify any malfunctioning modules and to identify modules for which calibration offsets are to be applied.

No anomalies observed on available MS products:

Polarisation	Start Time
V	20040502 193101
H	20040502 192941

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

MSM in H/H polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.602504	0.077241	-0.138388
7	P1	-3.324410	0.057490	-0.103202
11	P1	-4.621814	0.025905	0.067302
15	P1	-4.965362	0.040535	0.084778
19	P1	-3.359456	0.005256	-0.035387
22	P1	-4.516276	0.014063	0.016847
24	P1	-5.010204	0.015096	0.093622
28	P1	-4.595418	0.013698	0.010774

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.402681	0.080870	-0.023719
7	P2	-22.875753	0.115864	-0.017550

11	P2	-15.862804	0.137542	0.173155
15	P2	-7.159749	0.089571	-0.013556
19	P2	-9.517708	0.142388	0.011209
22	P2	-17.644985	0.095571	0.057720
24	P2	-20.973568	0.102282	0.057996
28	P2	-16.604650	0.082044	-0.000864

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.132800	0.003092	-0.009219
7	P3	-8.132804	0.003091	-0.009213
11	P3	-8.132818	0.003091	-0.009169
15	P3	-8.132824	0.003090	-0.009154
19	P3	-8.132825	0.003090	-0.009143
22	P3	-8.132820	0.003090	-0.009133
24	P3	-8.132829	0.003091	-0.009103
28	P3	-8.132922	0.003093	-0.009521

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.251675	0.320213	-0.191320
7	P1	-2.884948	0.268433	-0.195958
11	P1	-3.815489	0.021237	-0.000287
15	P1	-4.029352	0.352865	0.076938
19	P1	-3.250248	0.061961	-0.074510
22	P1	-5.805473	0.042956	0.058134
24	P1	-4.049809	0.089723	-0.009483
28	P1	-2.859695	0.069691	-0.117946

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.109003	0.039850	-0.065039
7	P2	-22.995338	0.027135	0.035512
11	P2	-11.056186	0.186008	-0.064561
15	P2	-4.920905	0.027337	-0.084554
19	P2	-6.823647	0.029816	-0.104883
22	P2	-7.702083	0.027917	-0.014141
24	P2	-11.013090	0.052723	-0.072309
28	P2	-19.021721	0.027250	-0.042904

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.968201	0.003500	-0.014531
7	P3	-7.968225	0.003498	-0.014237
11	P3	-7.968157	0.003496	-0.014351
15	P3	-7.968085	0.003513	-0.014517
19	P3	-7.968177	0.003500	-0.014606
22	P3	-7.968352	0.003490	-0.014621
24	P3	-7.968045	0.003518	-0.014362
28	P3	-7.968063	0.003514	-0.014357

4.3 - cal pulses monitoring (all rows)

4.3.1 - Evolution for WVS



4.3.2 - Evolution for GM1



5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel stat DSS-B

MEAN I	mean	0.000482691
	stdev	2.32836e-07
MEAN Q	mean	0.000496202
	stdev	2.66322e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127931
	stdev	0.00113307
STDEV Q	mean	0.128180
	stdev	0.00114593





5.3 - Gain imbalance I/Q



6 - Doppler Analysis

Preliminary report. The data is not yet controlled

6.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)	
	Ascending
	Descending

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>

6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

6.5 - Absolute Doppler for GM1

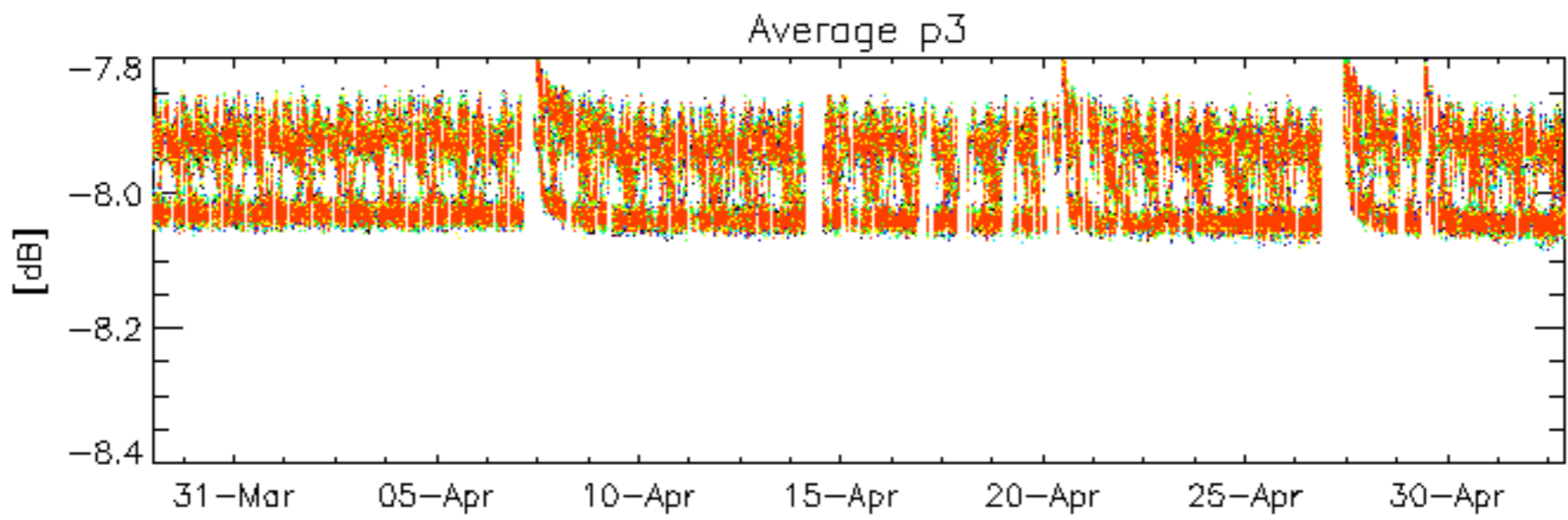
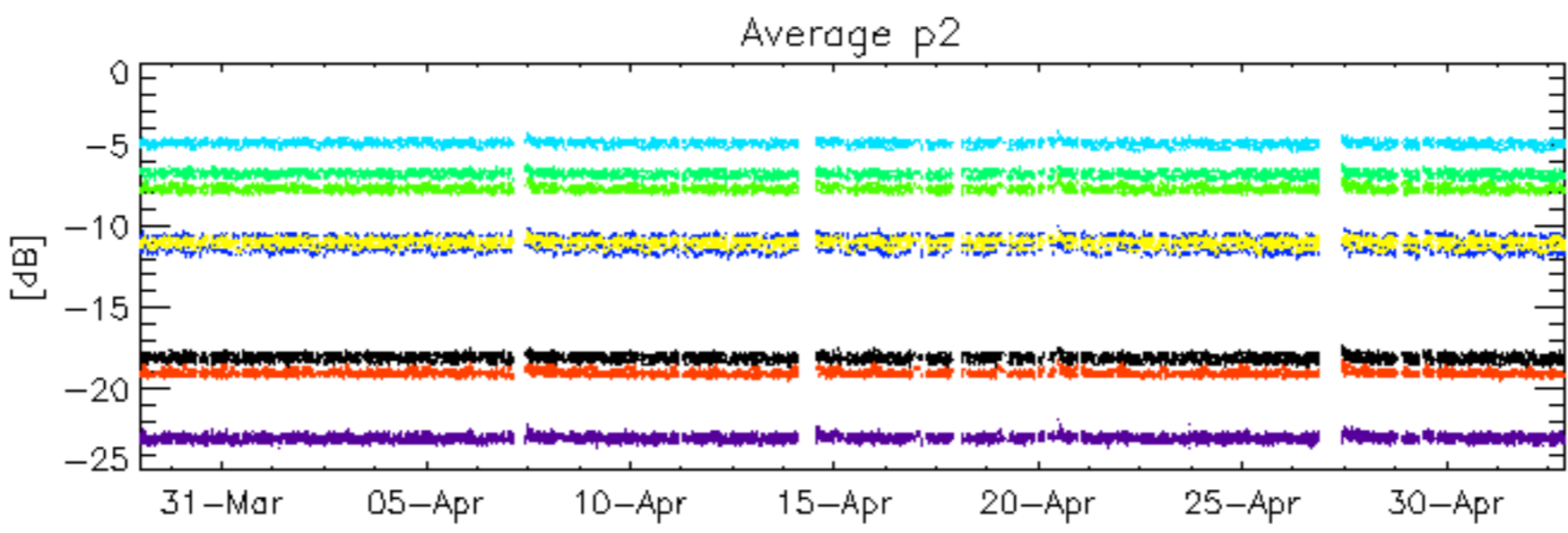
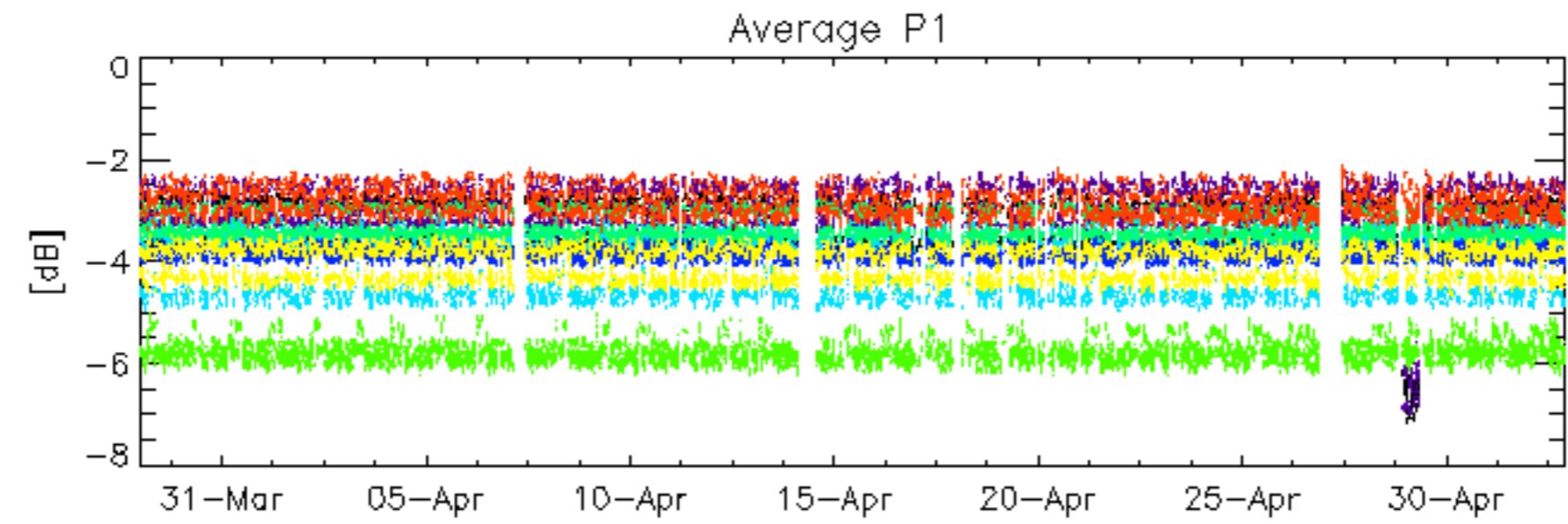
Evolution of Absolute Doppler

<input type="checkbox"/>
Ascending
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Descending

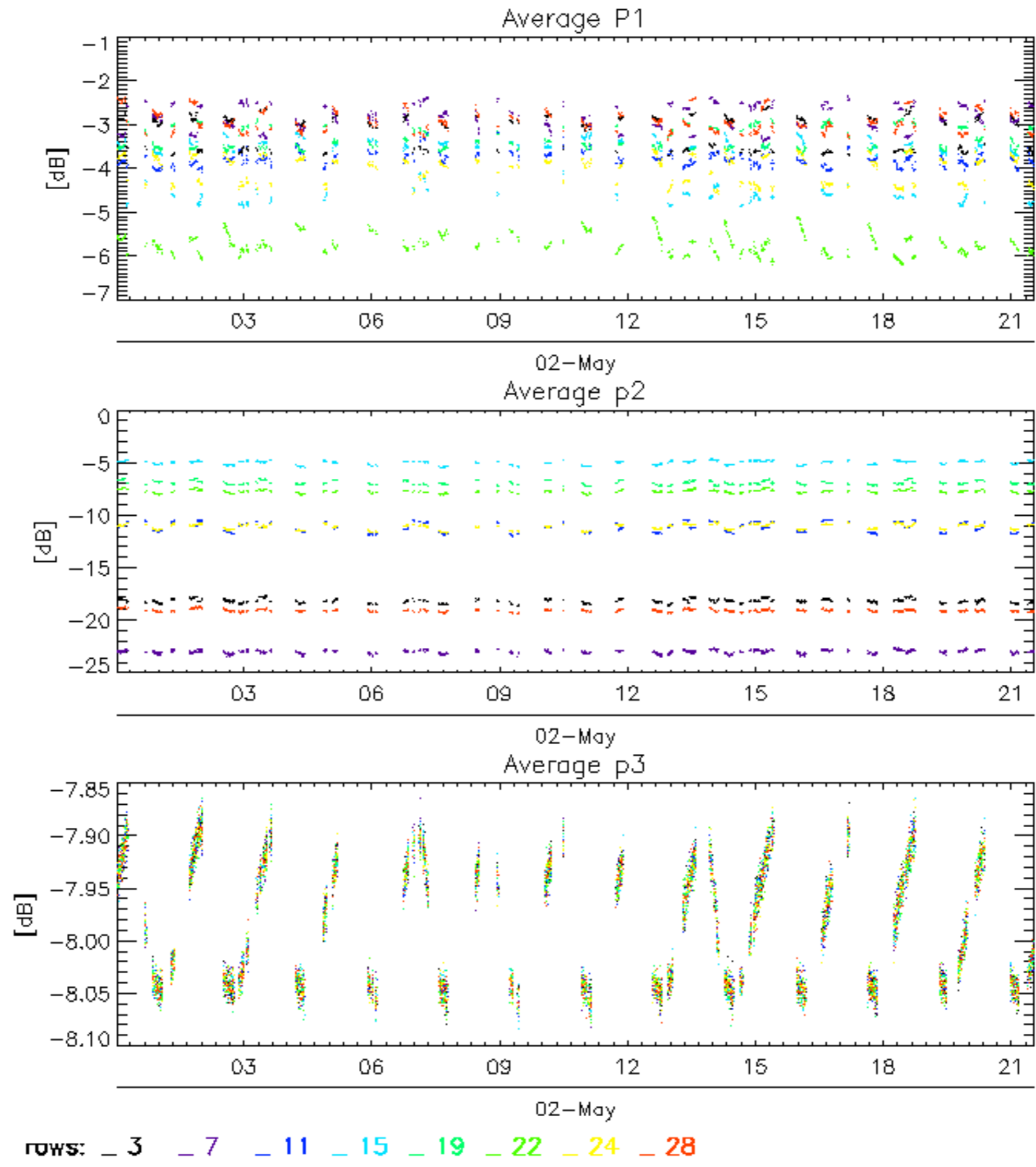
6.6 - Doppler evolution versus ANX for GM1

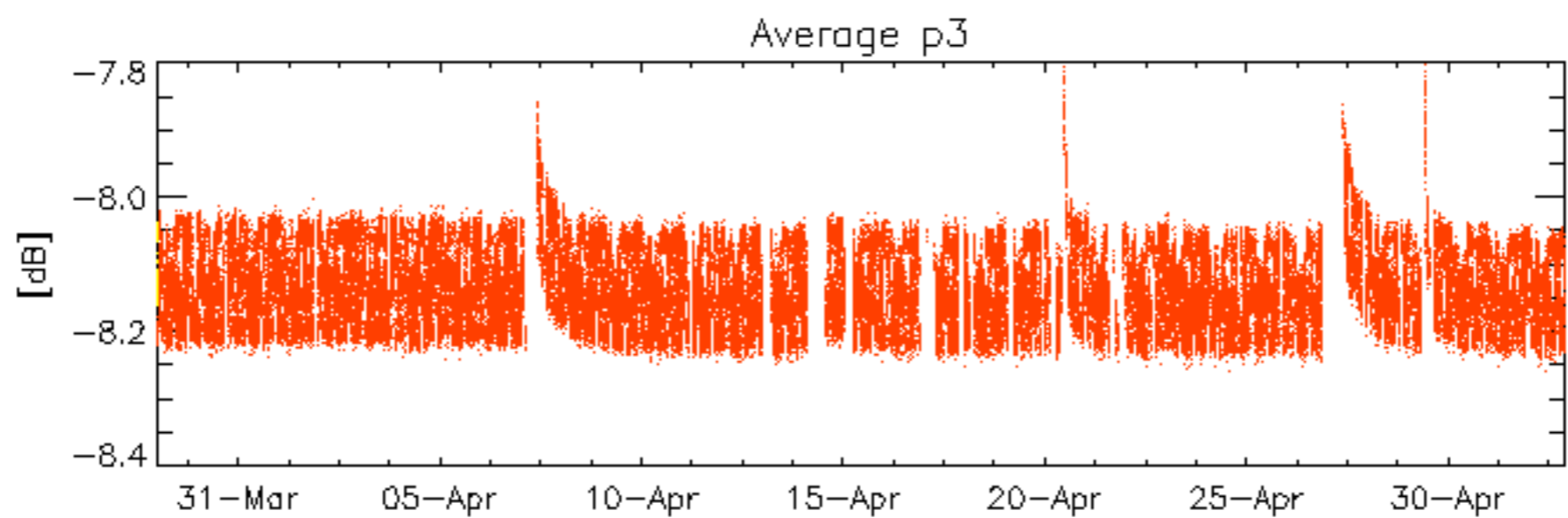
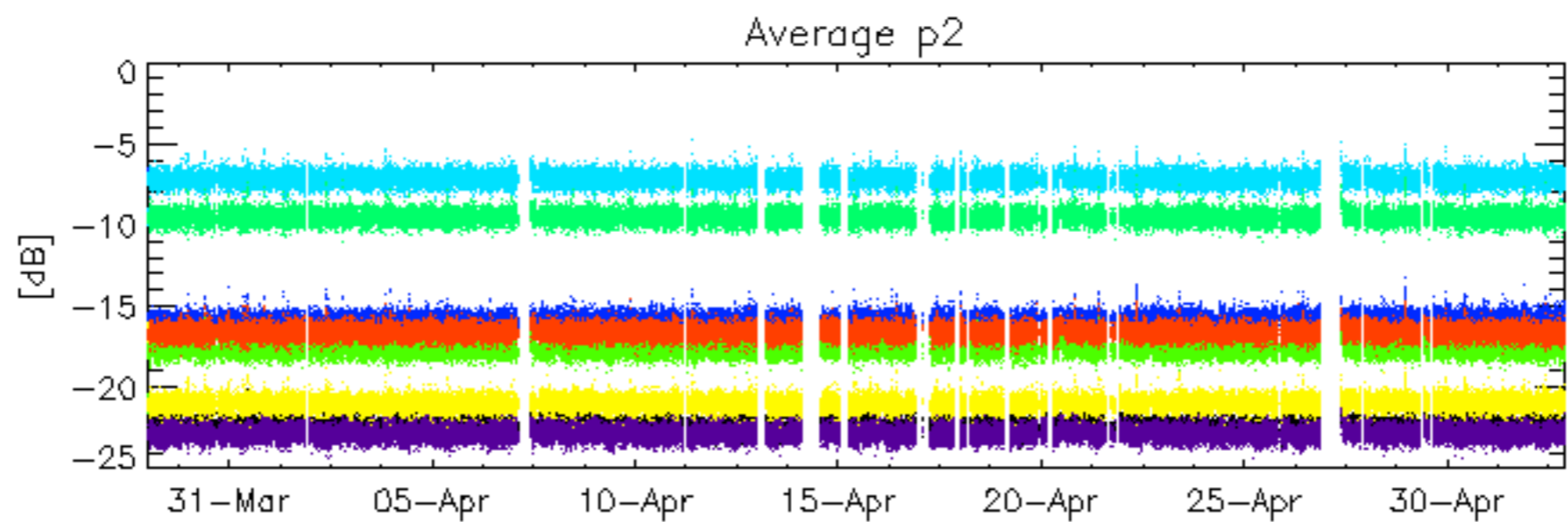
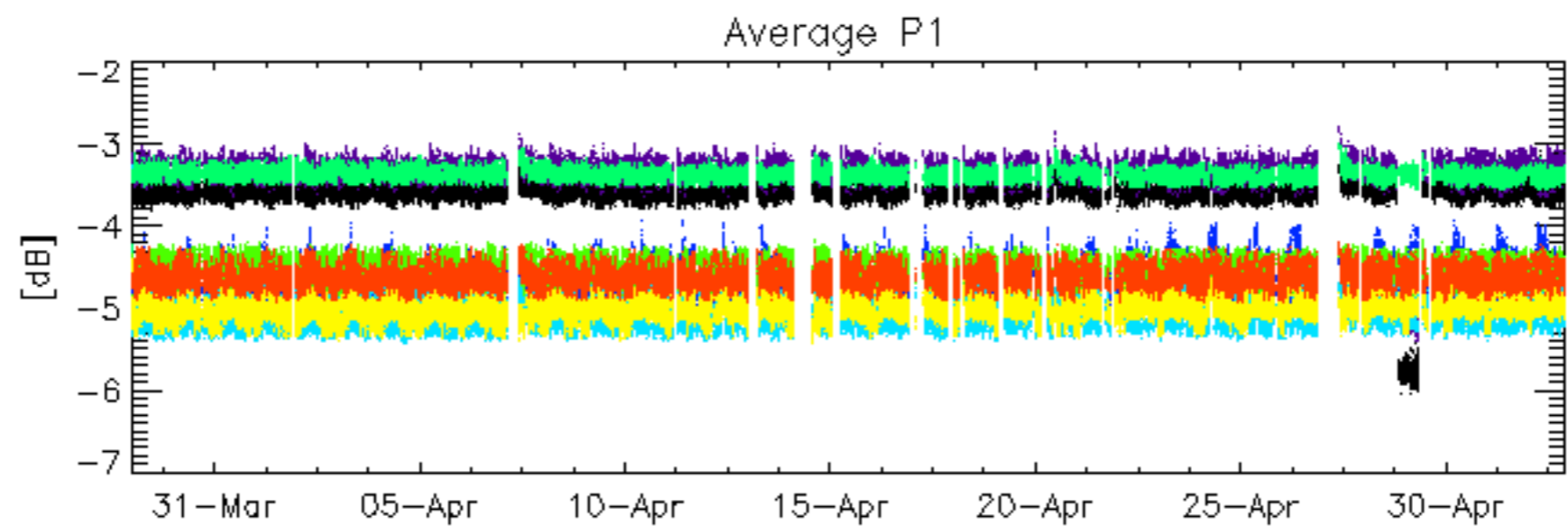
Evolution Doppler error versus ANX

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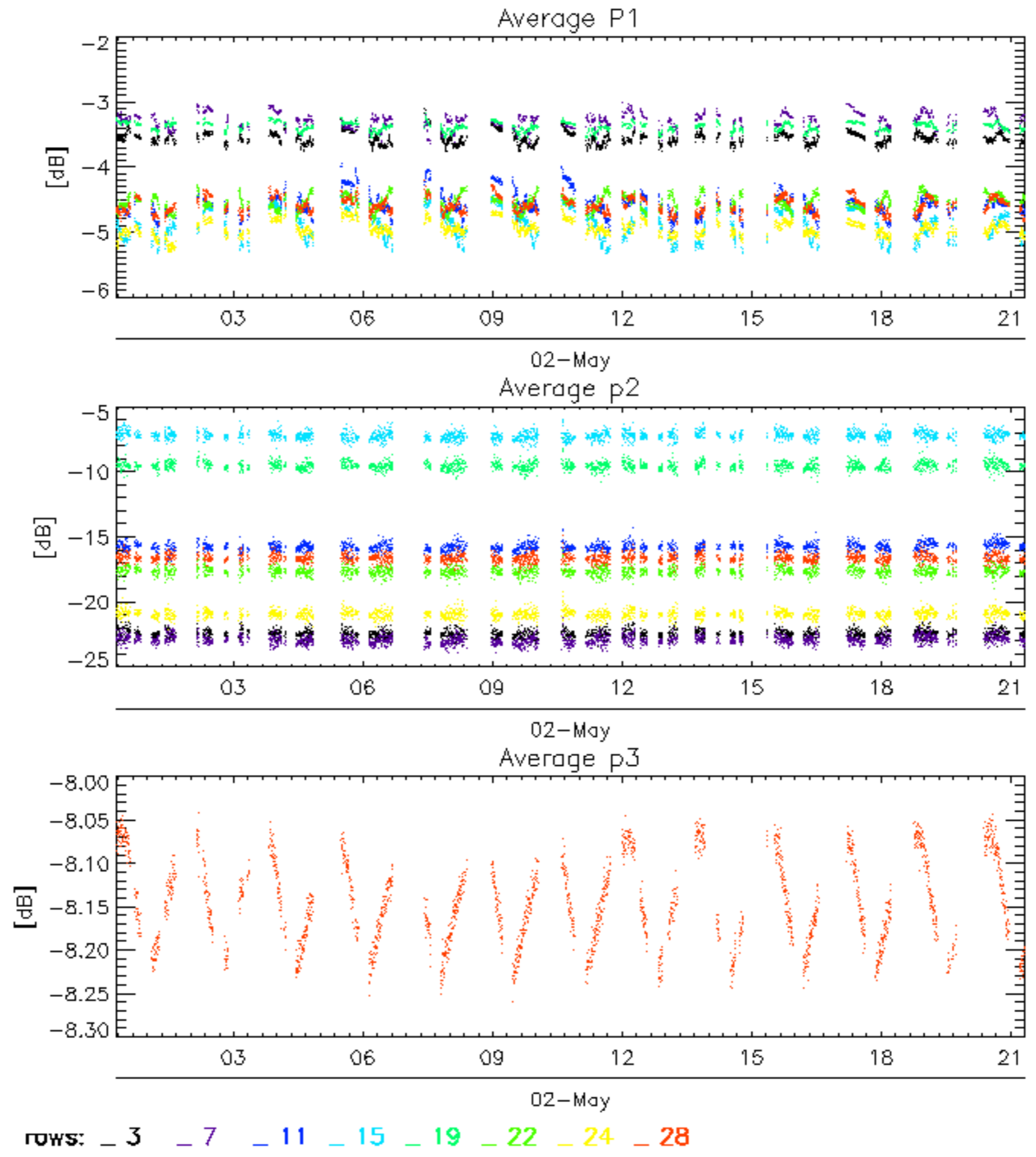


rows: 3 7 11 15 19 22 24 28



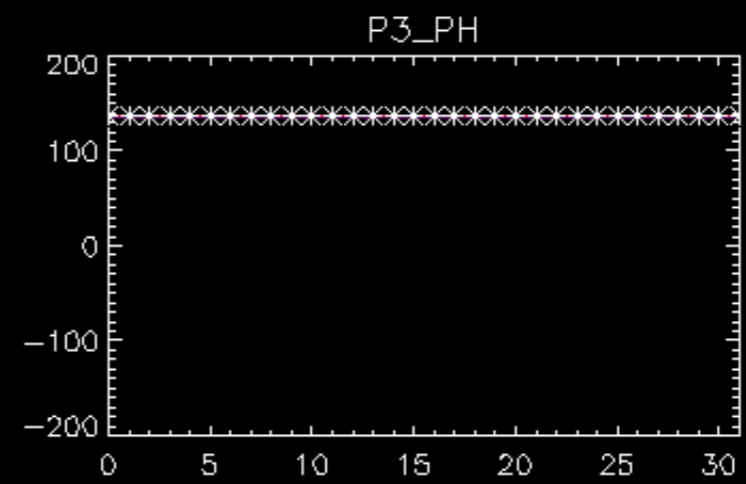
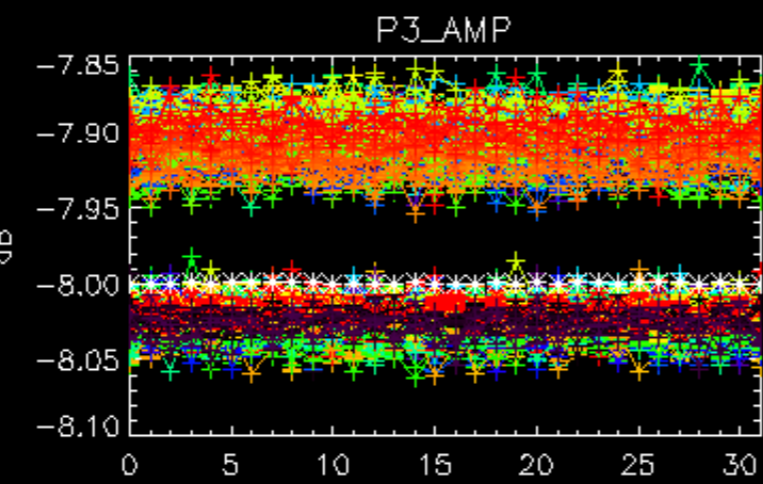
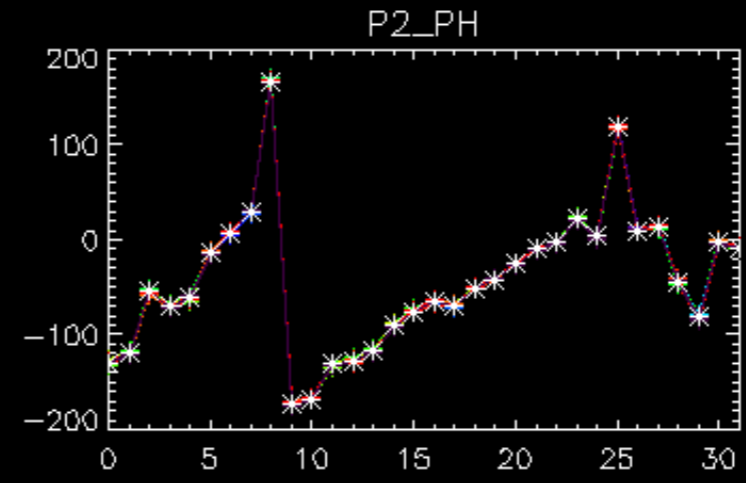
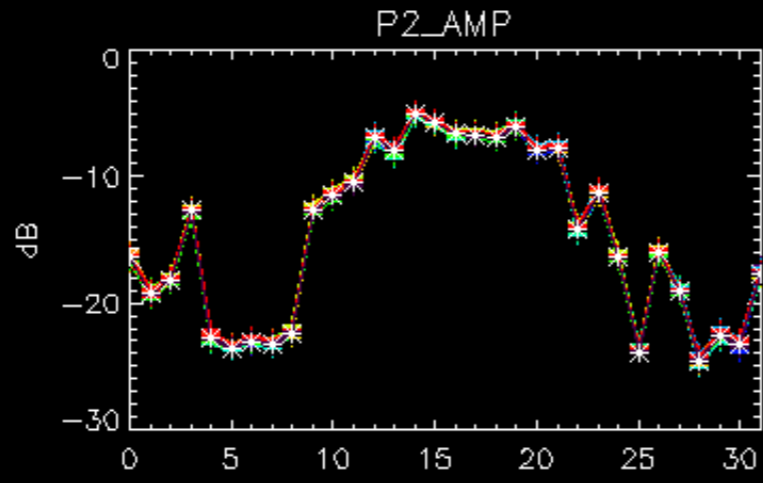
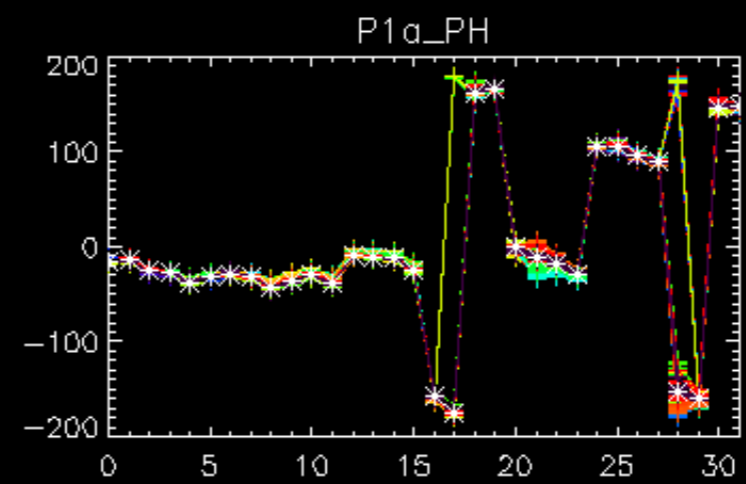
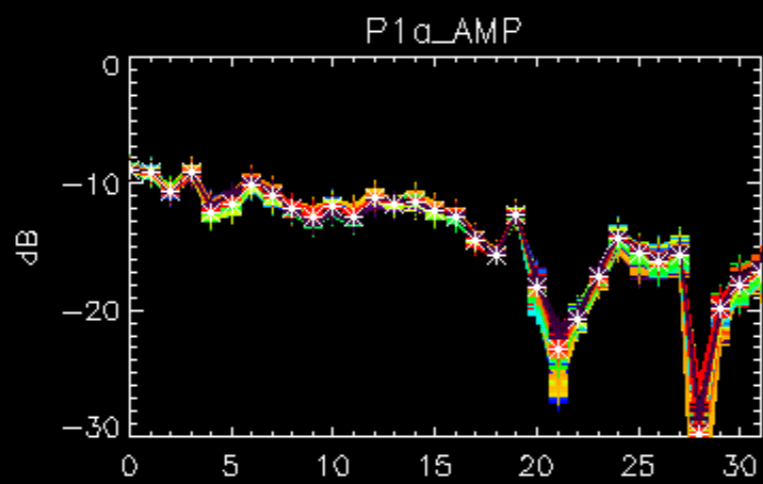
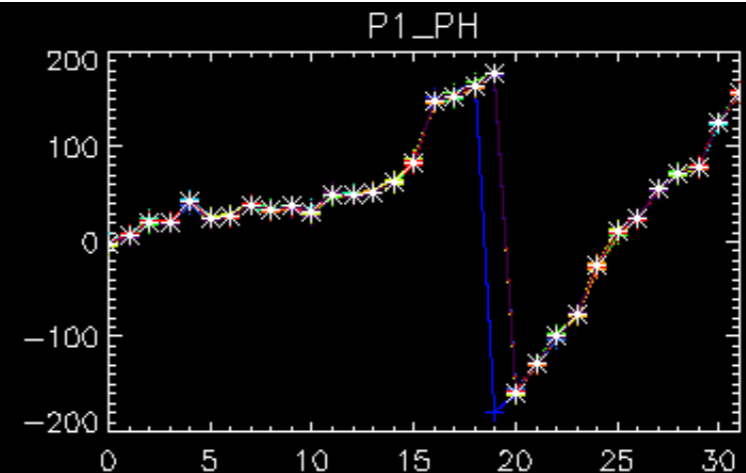
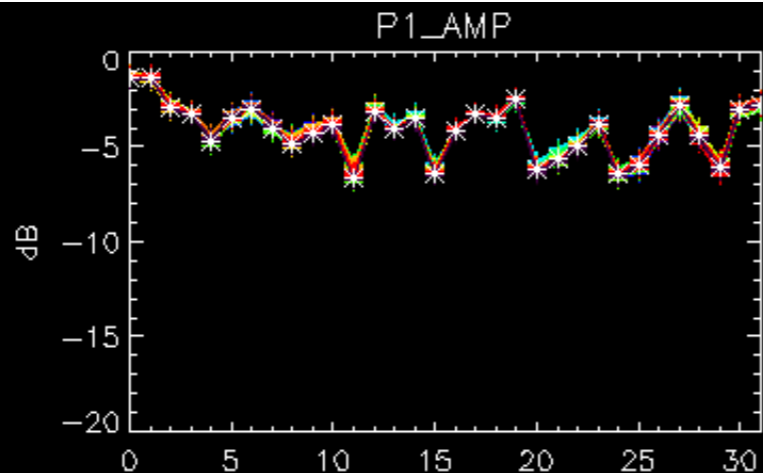


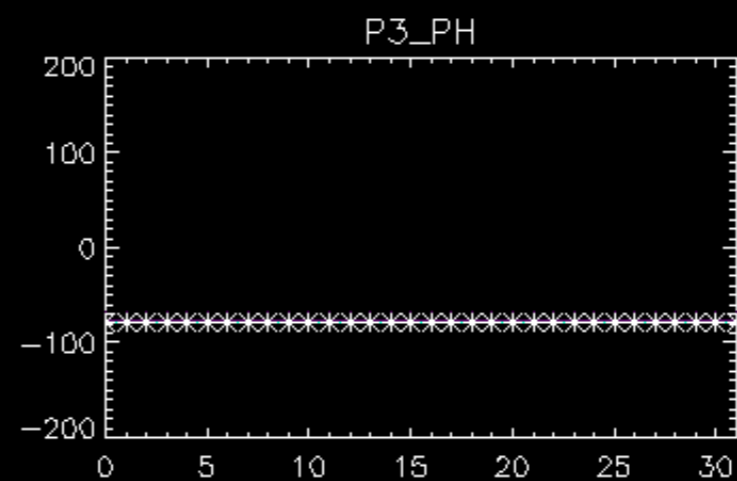
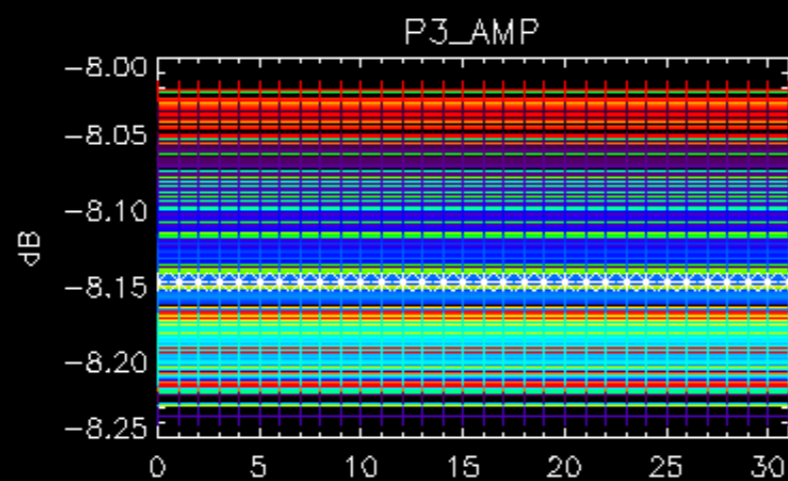
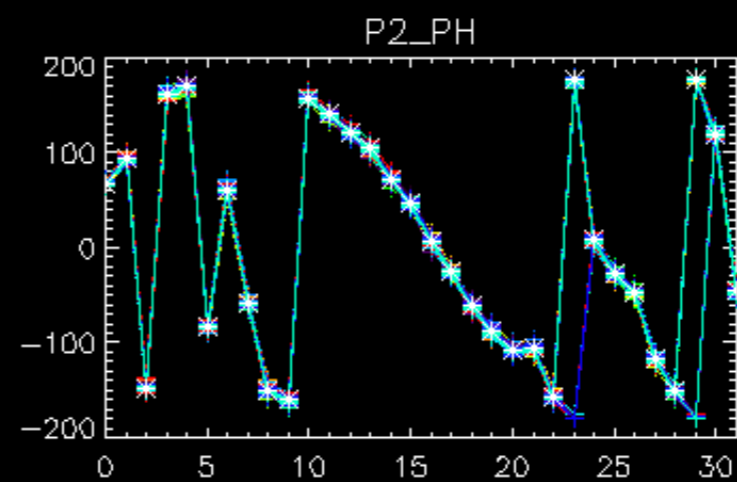
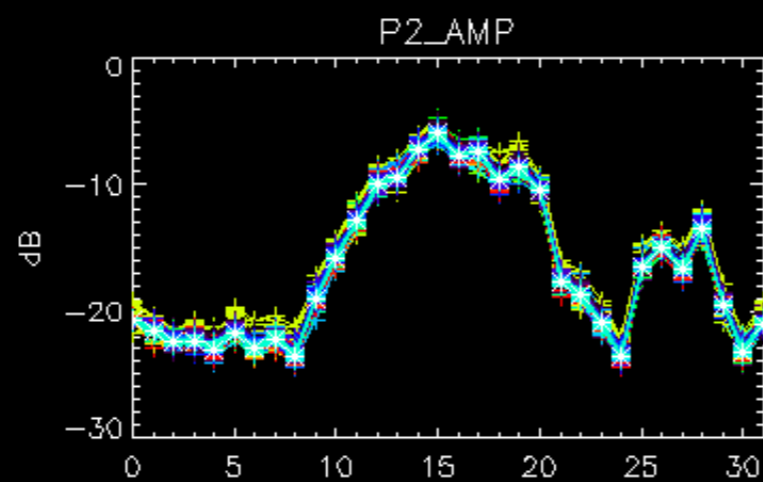
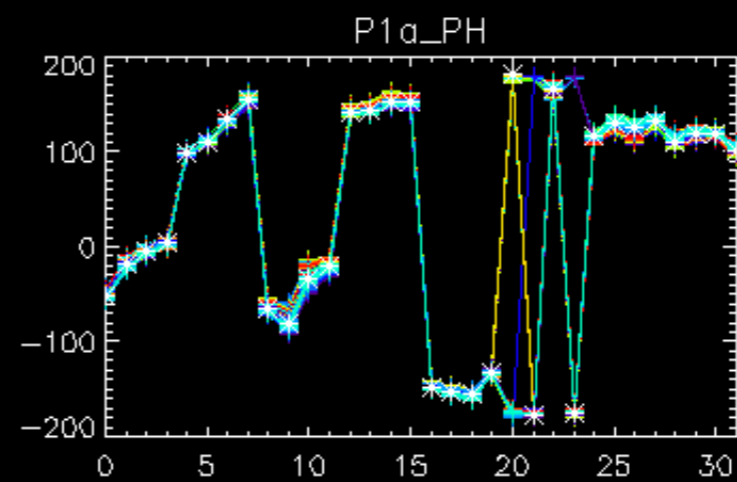
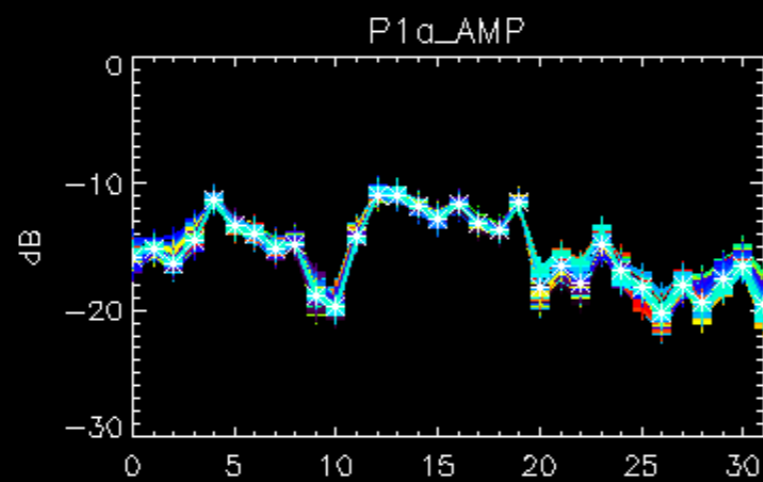
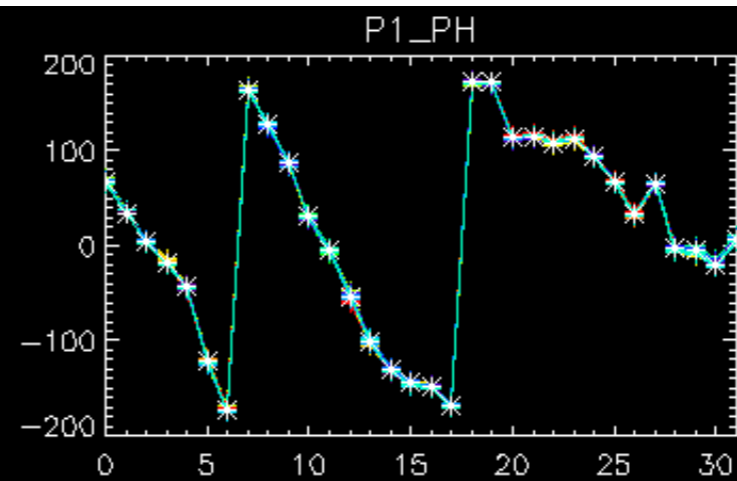
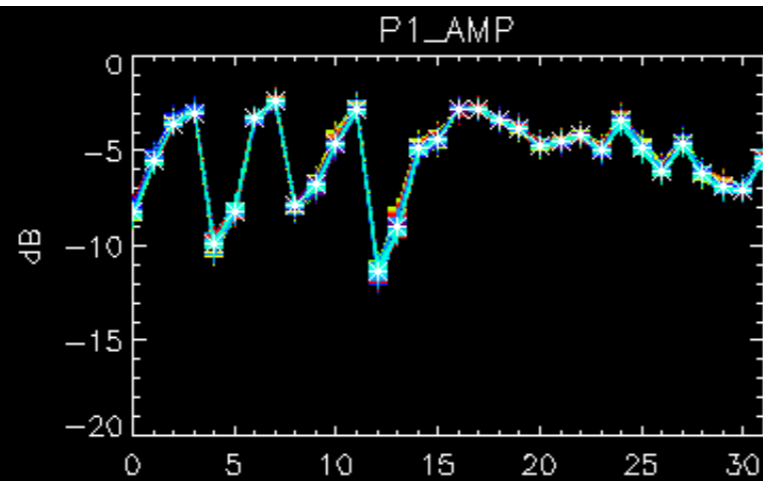
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28



No anomalies observed on available browse products

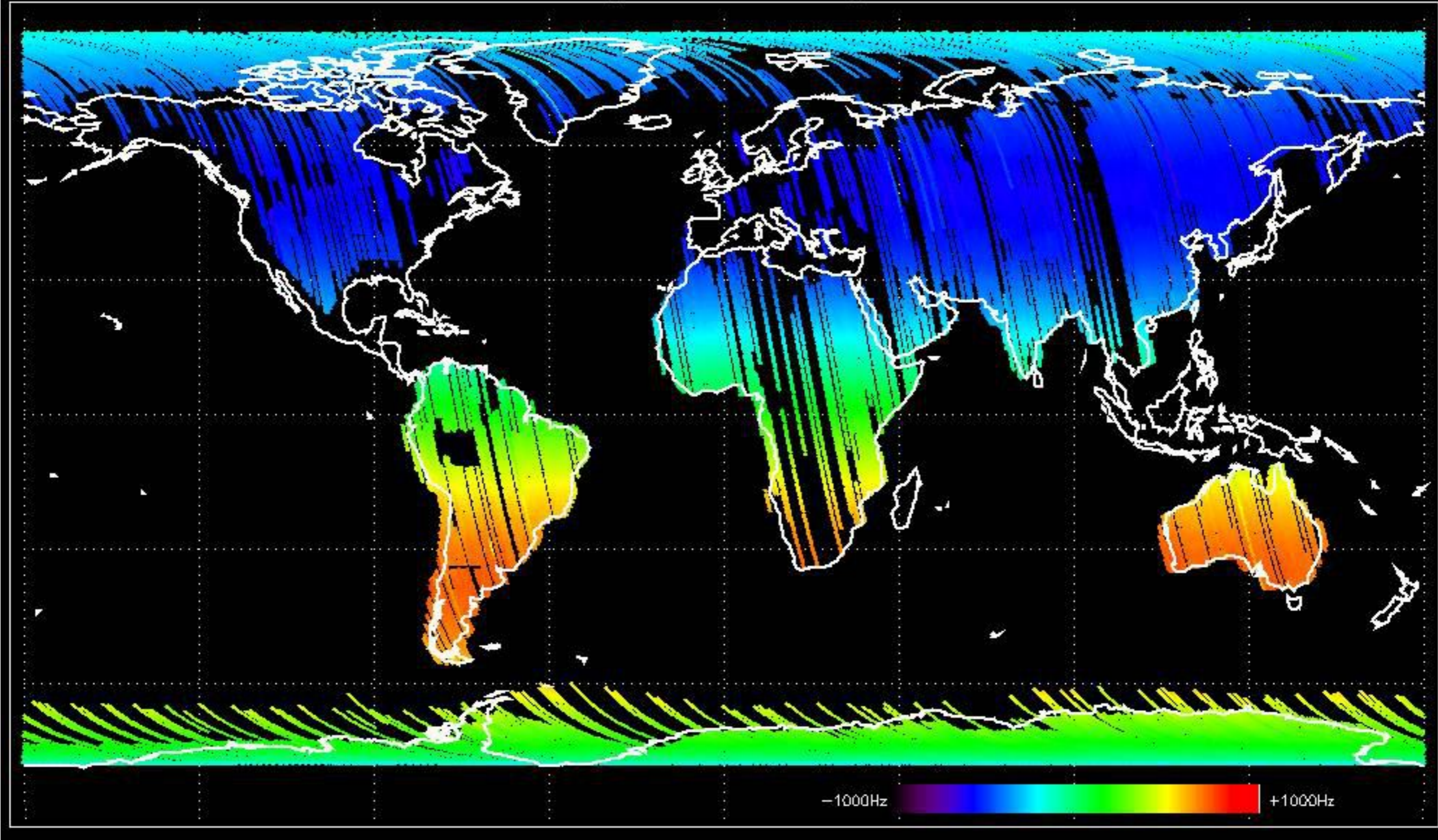
No anomalies observed.



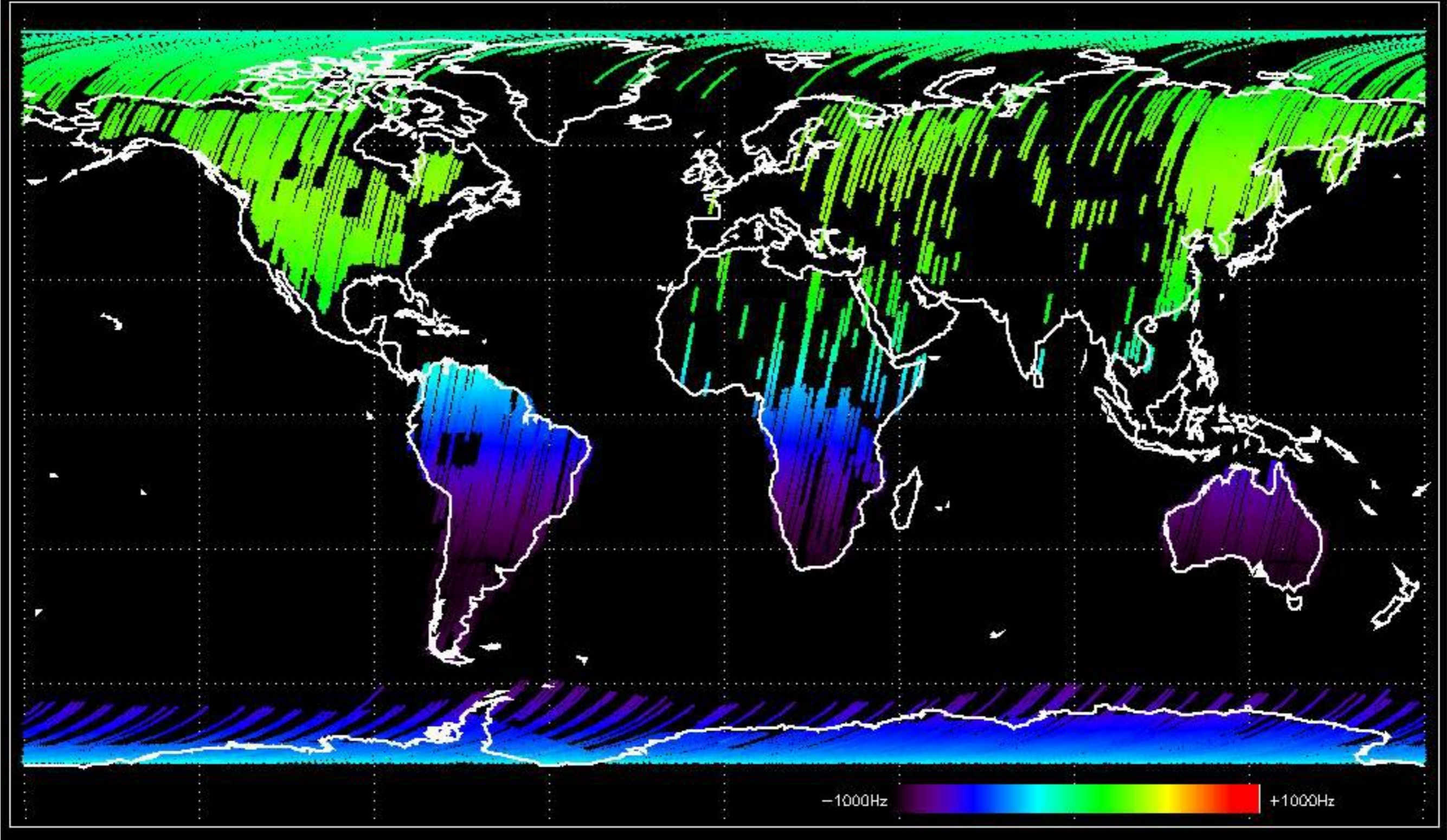


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

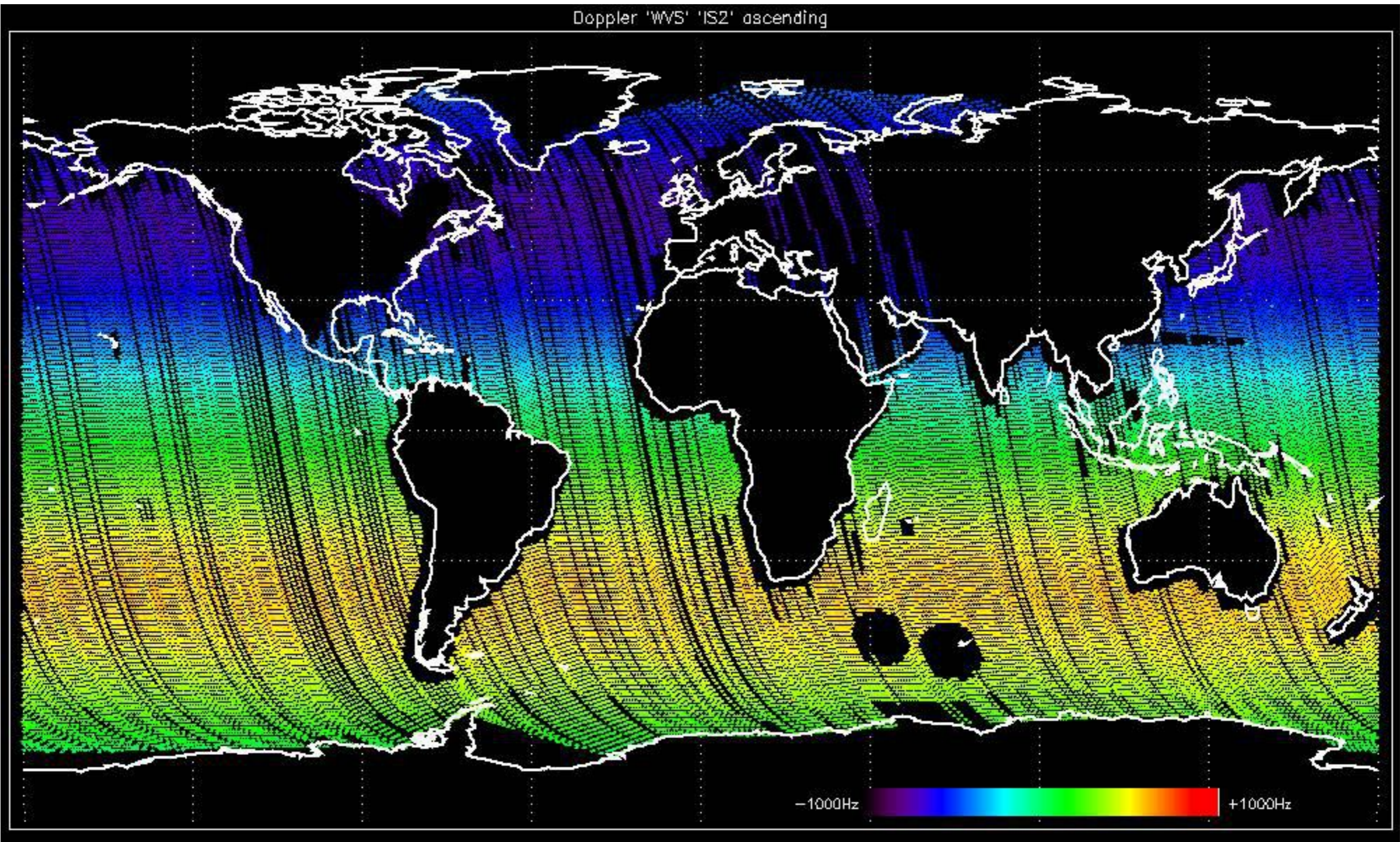
Doppler 'GM1' 'SS1' ascending



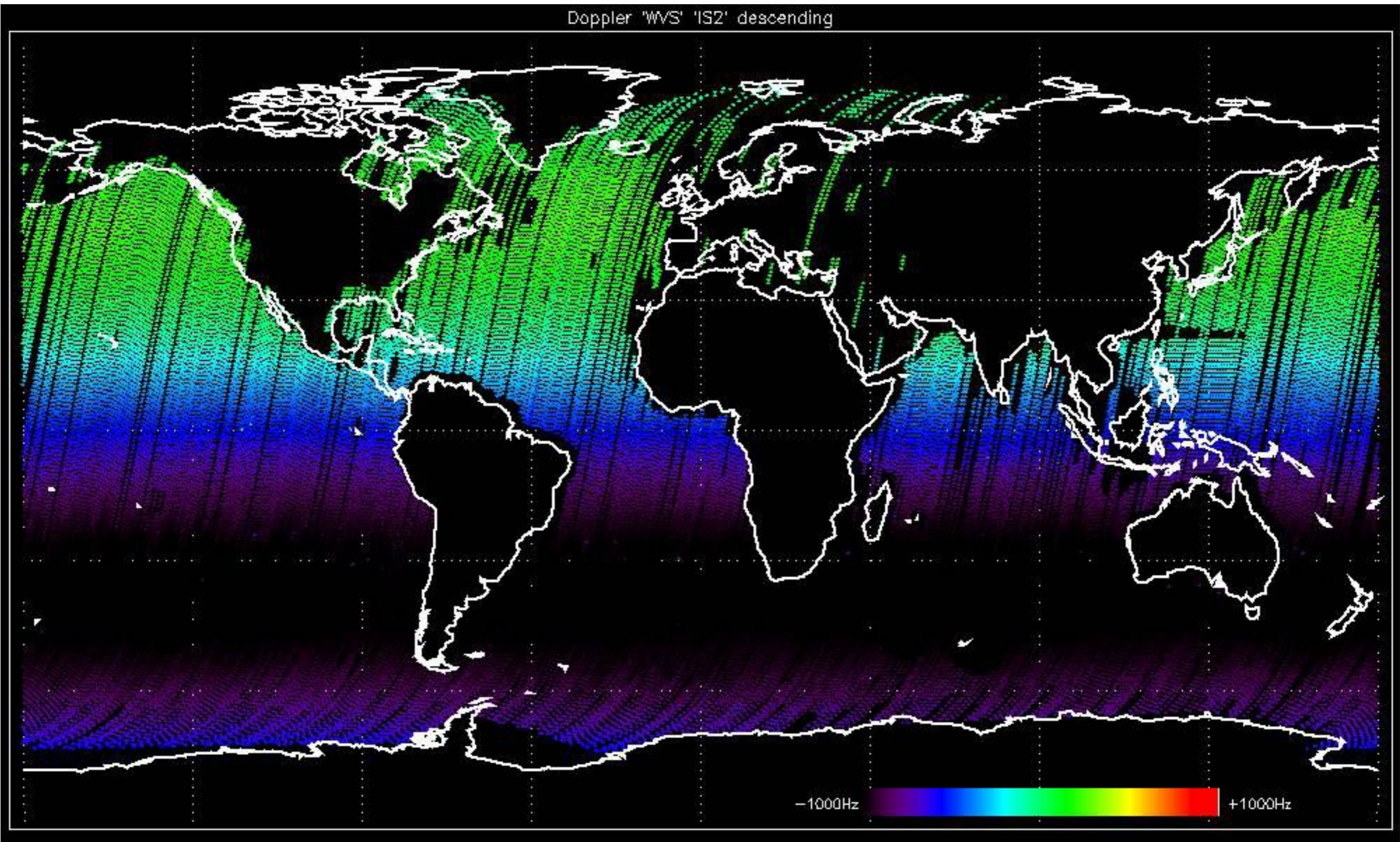
Doppler 'GM1' 'SS1' descending

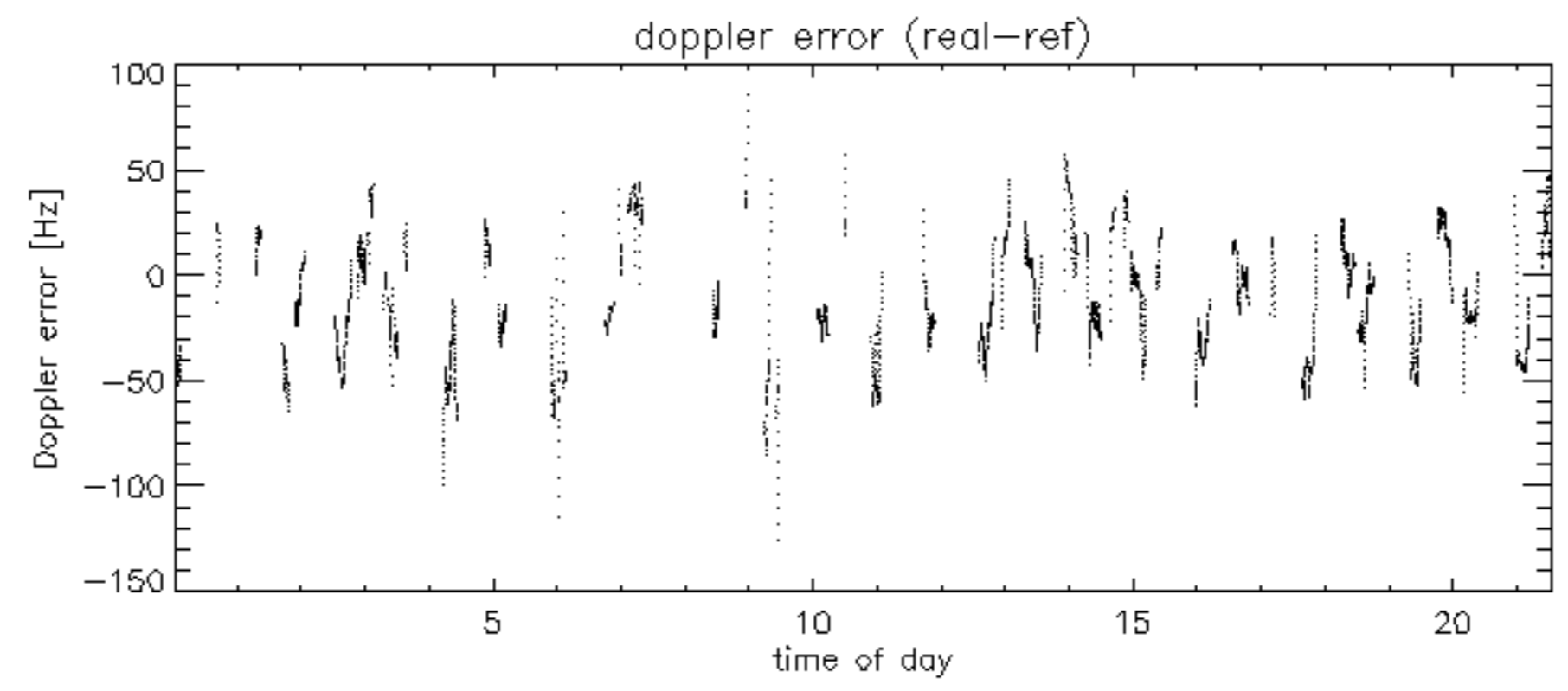
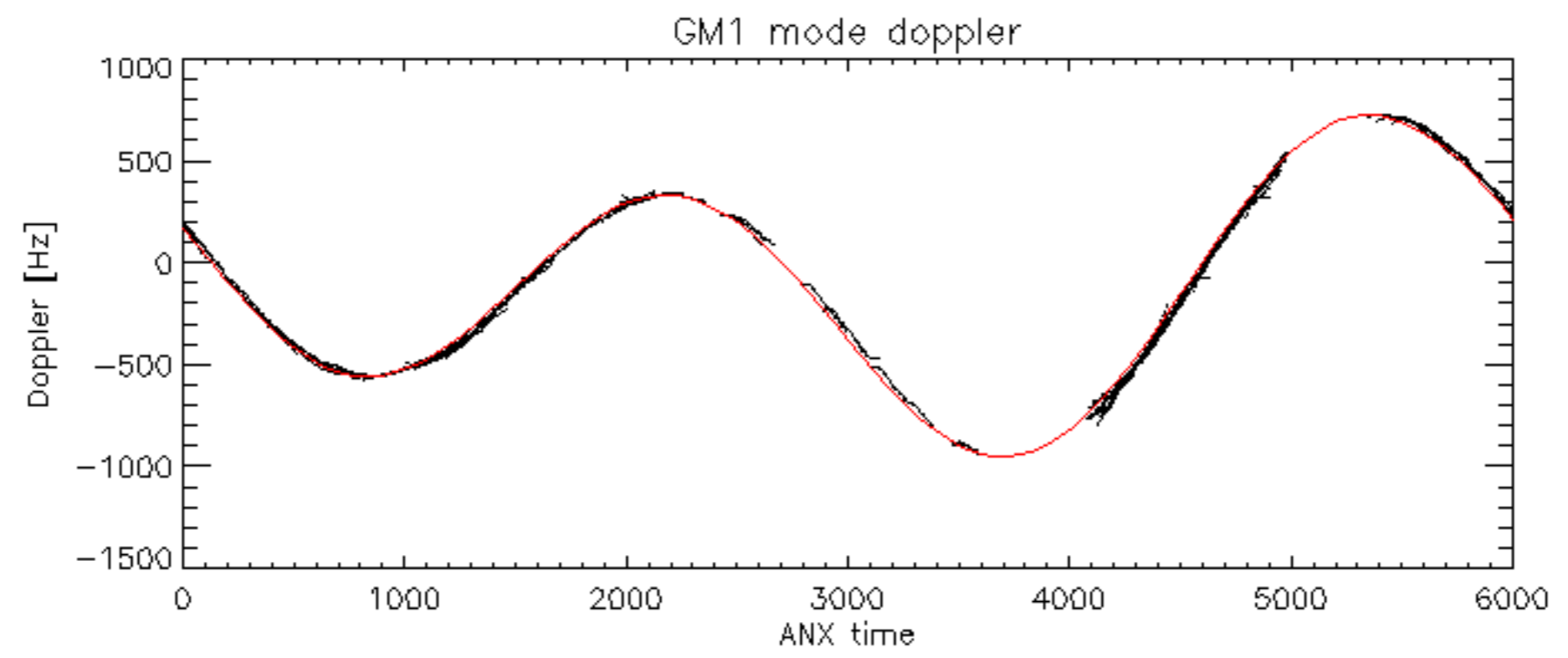


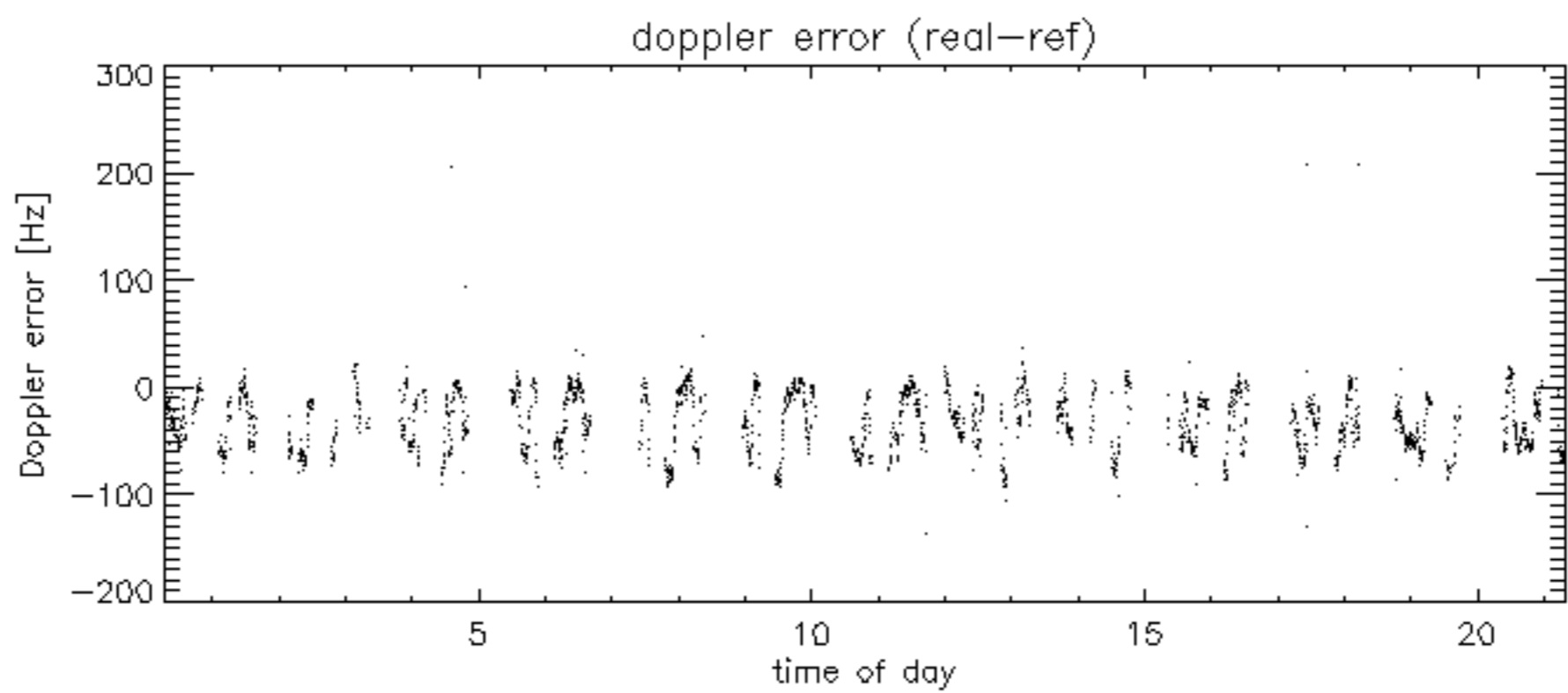
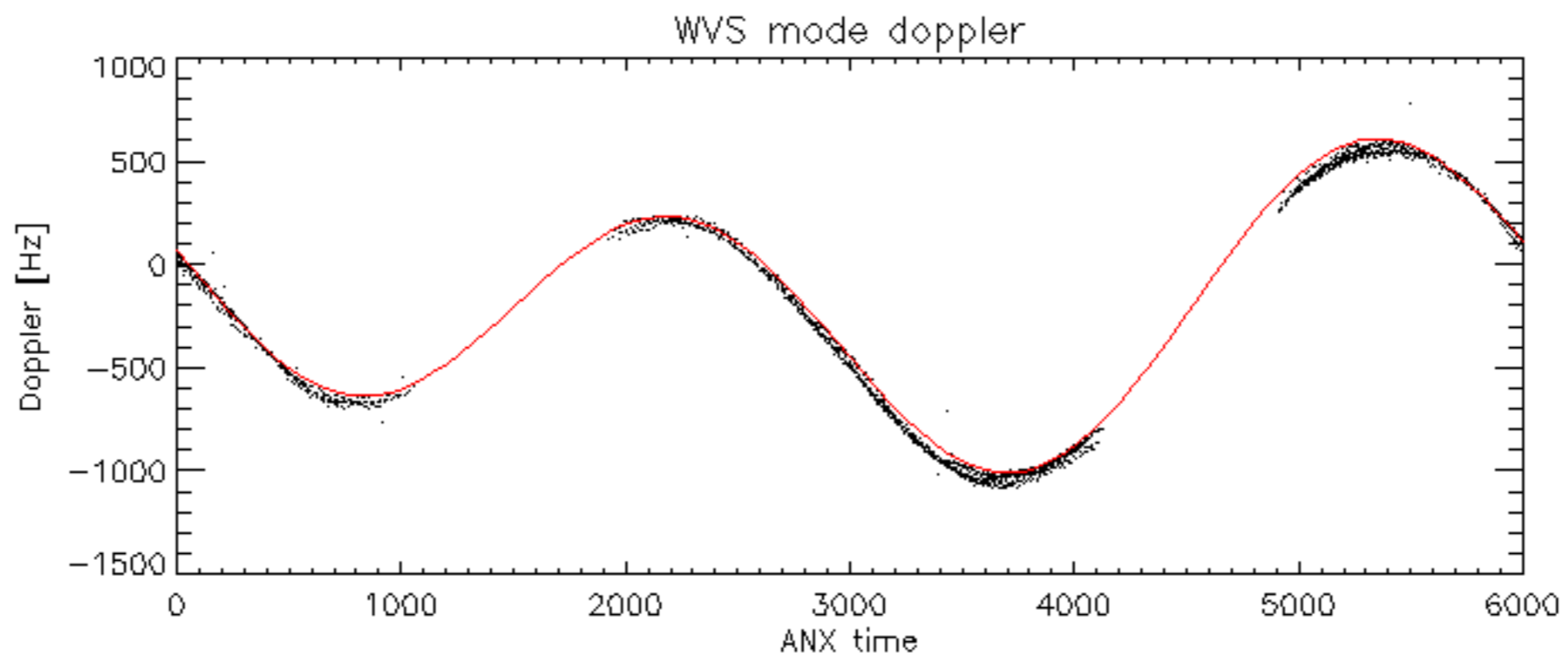
Doppler 'WVS' 'IS2' ascending



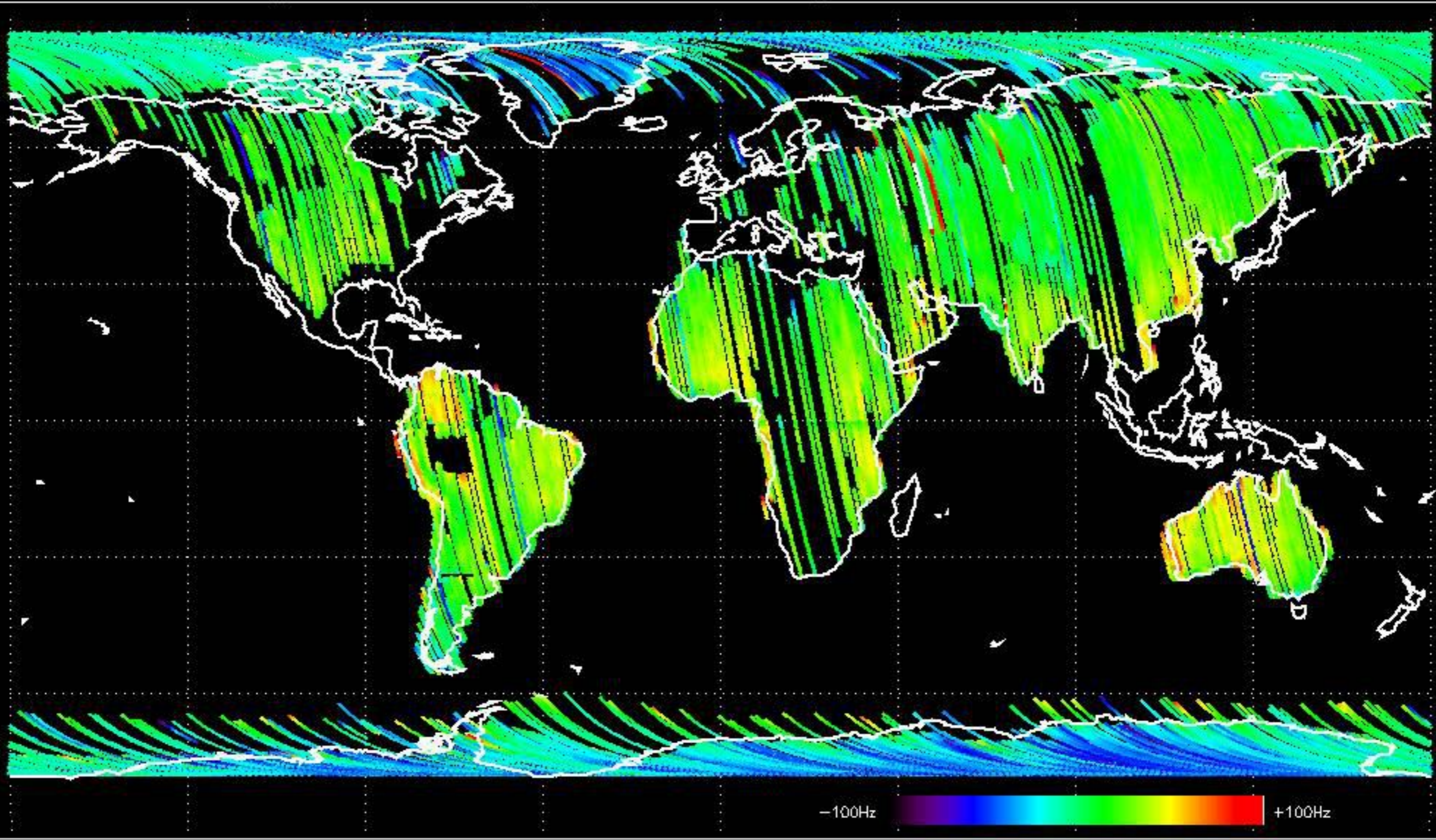
Doppler 'WVS' 'IS2' descending



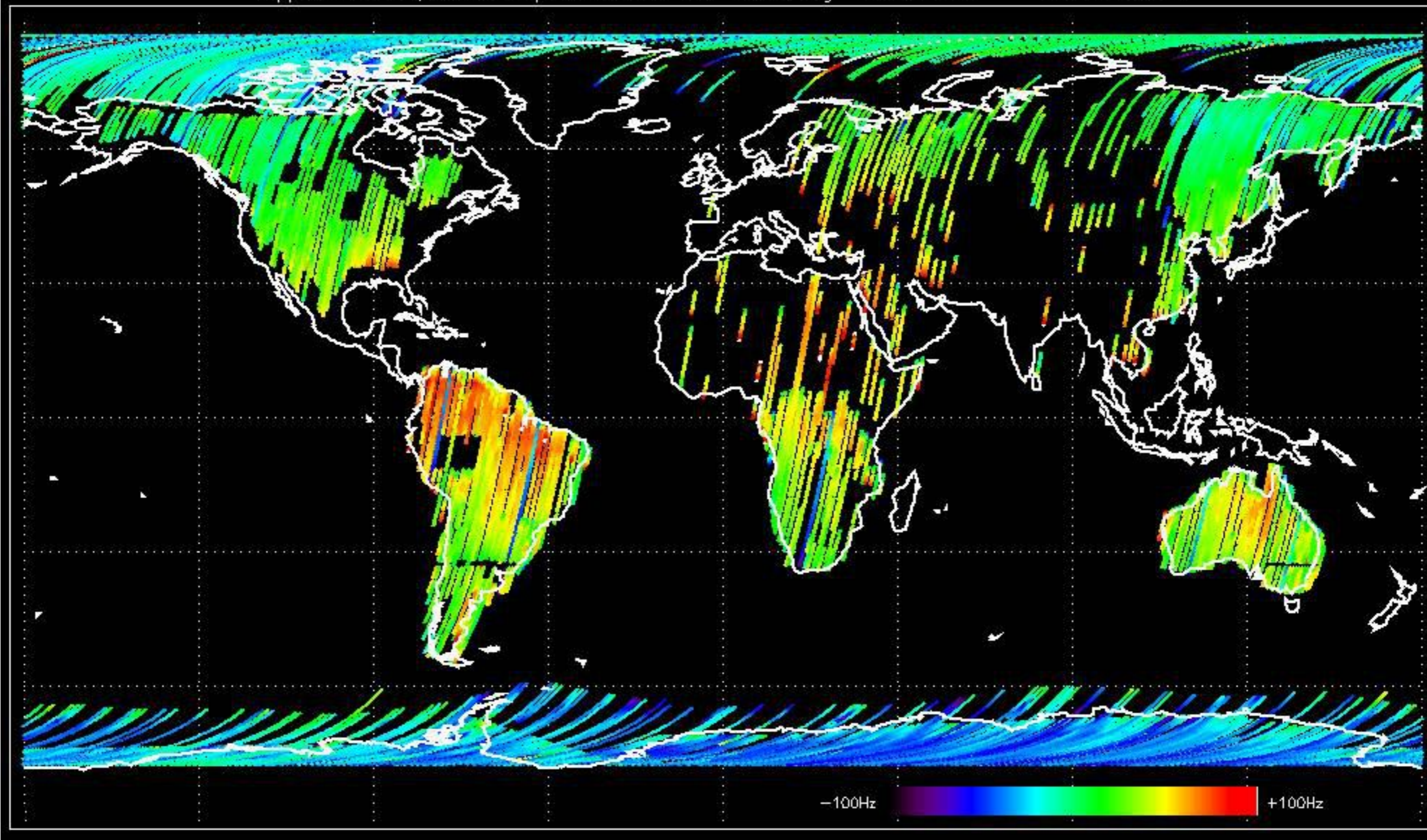




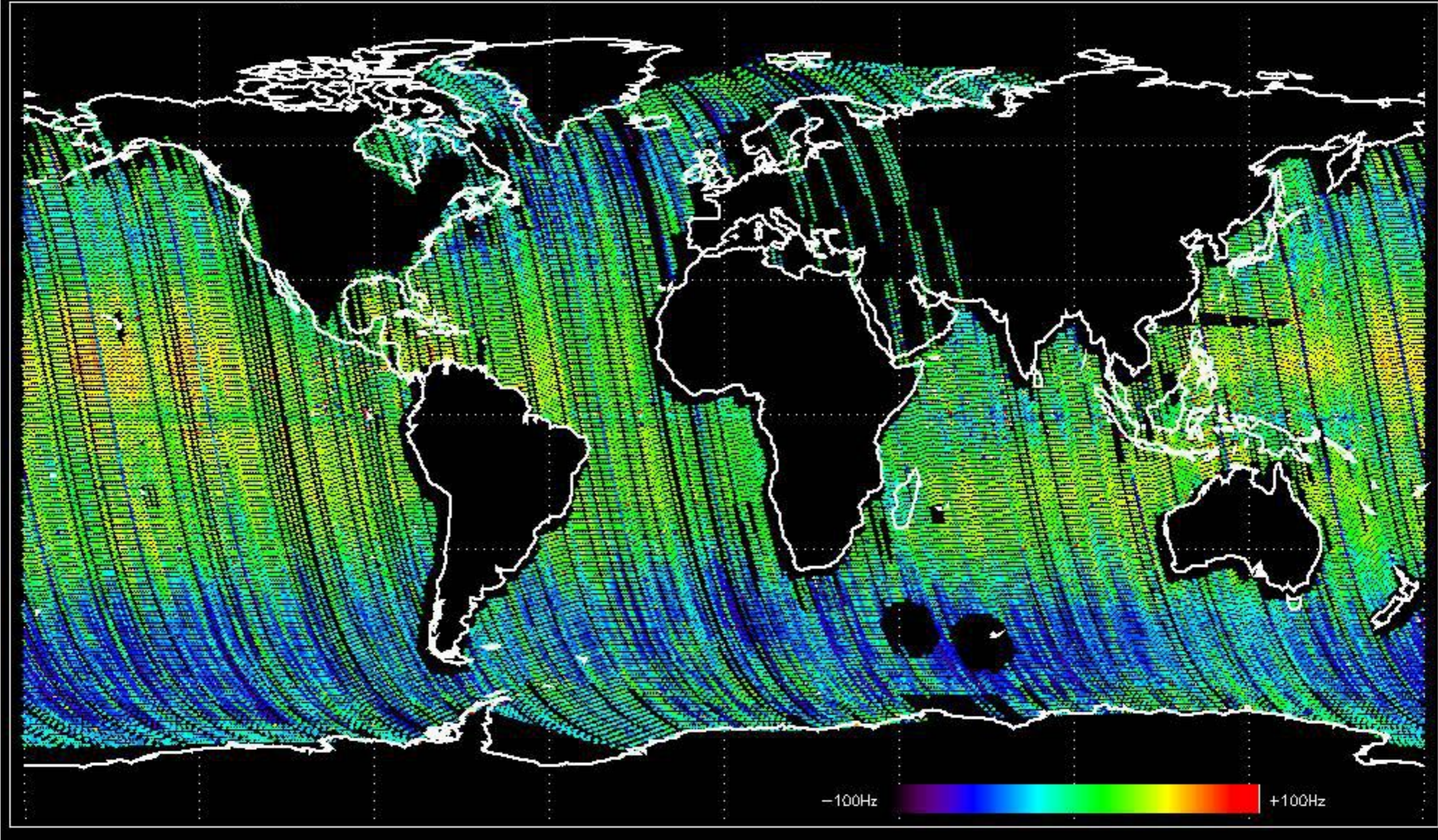
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.928885 Hz



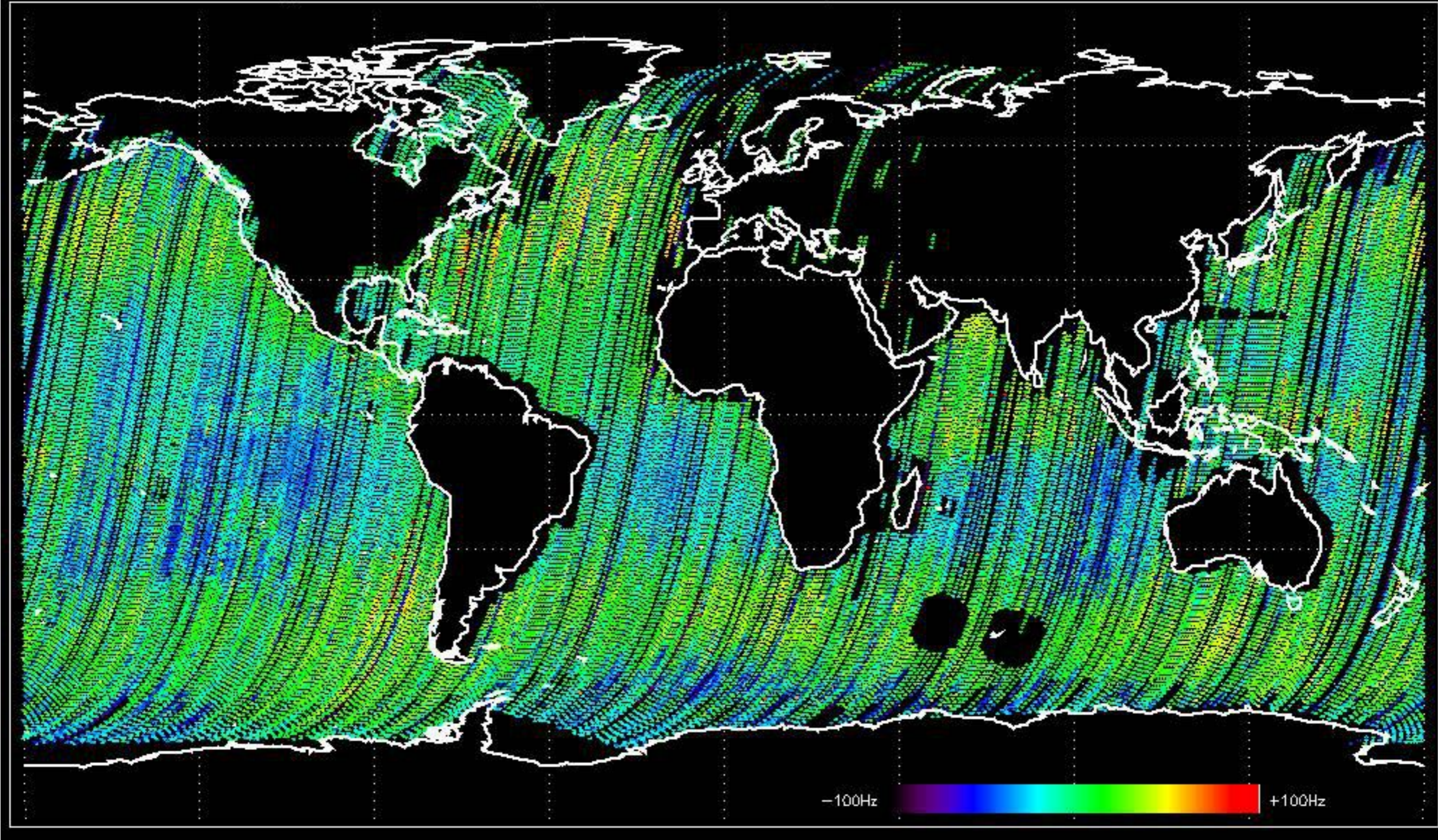
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.409925 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -36.938066 Hz

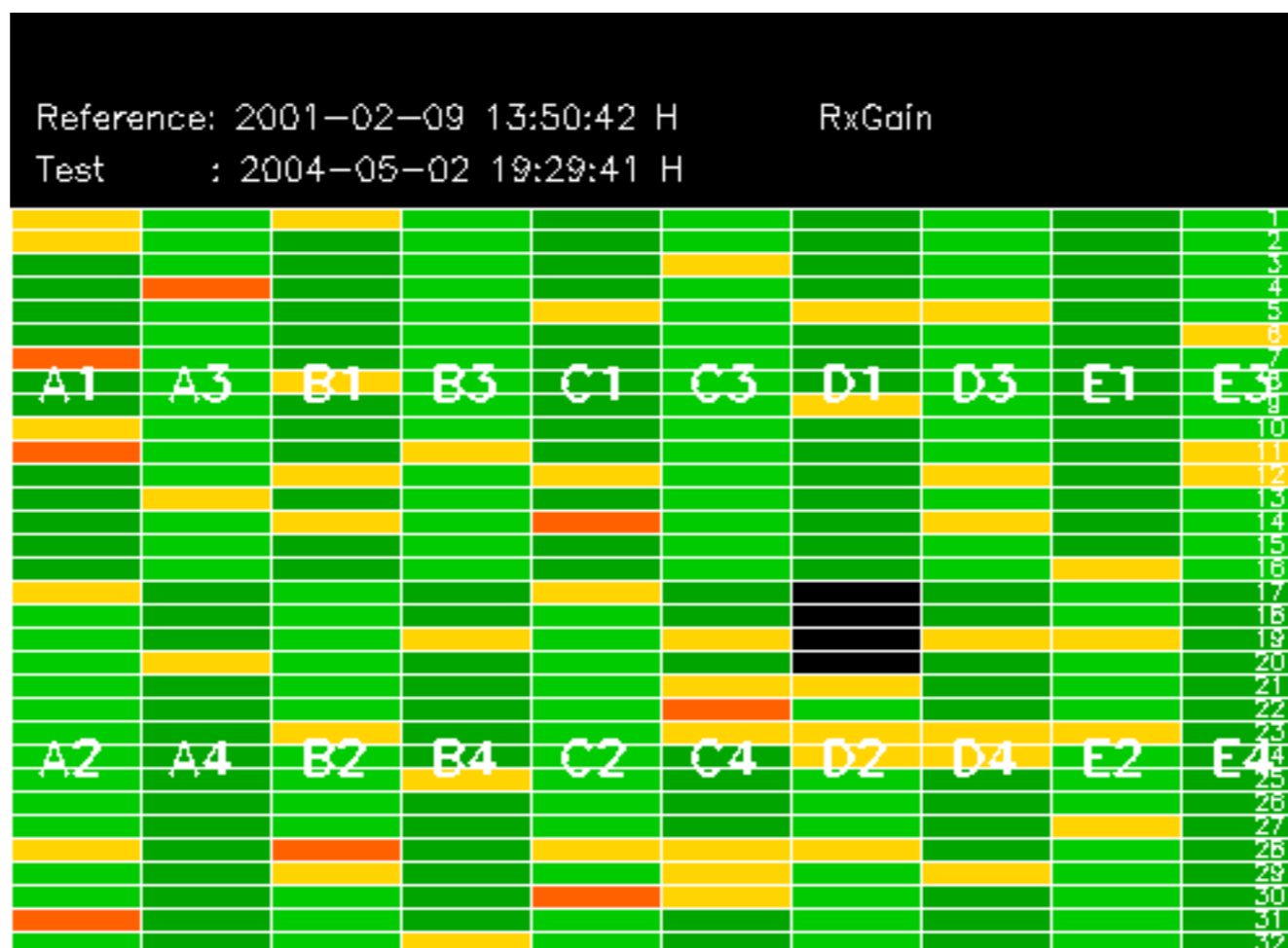


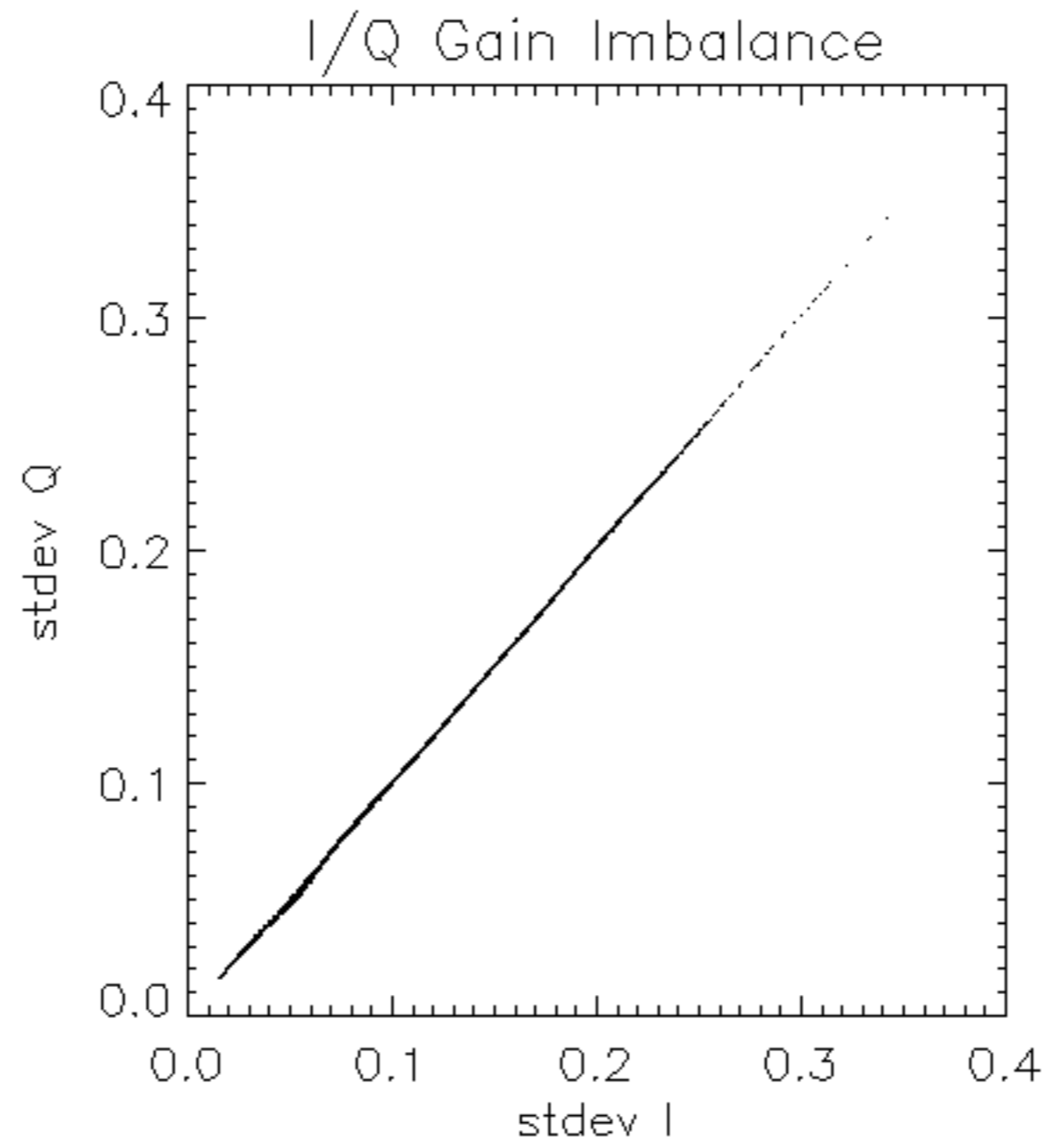
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -35.161484 Hz

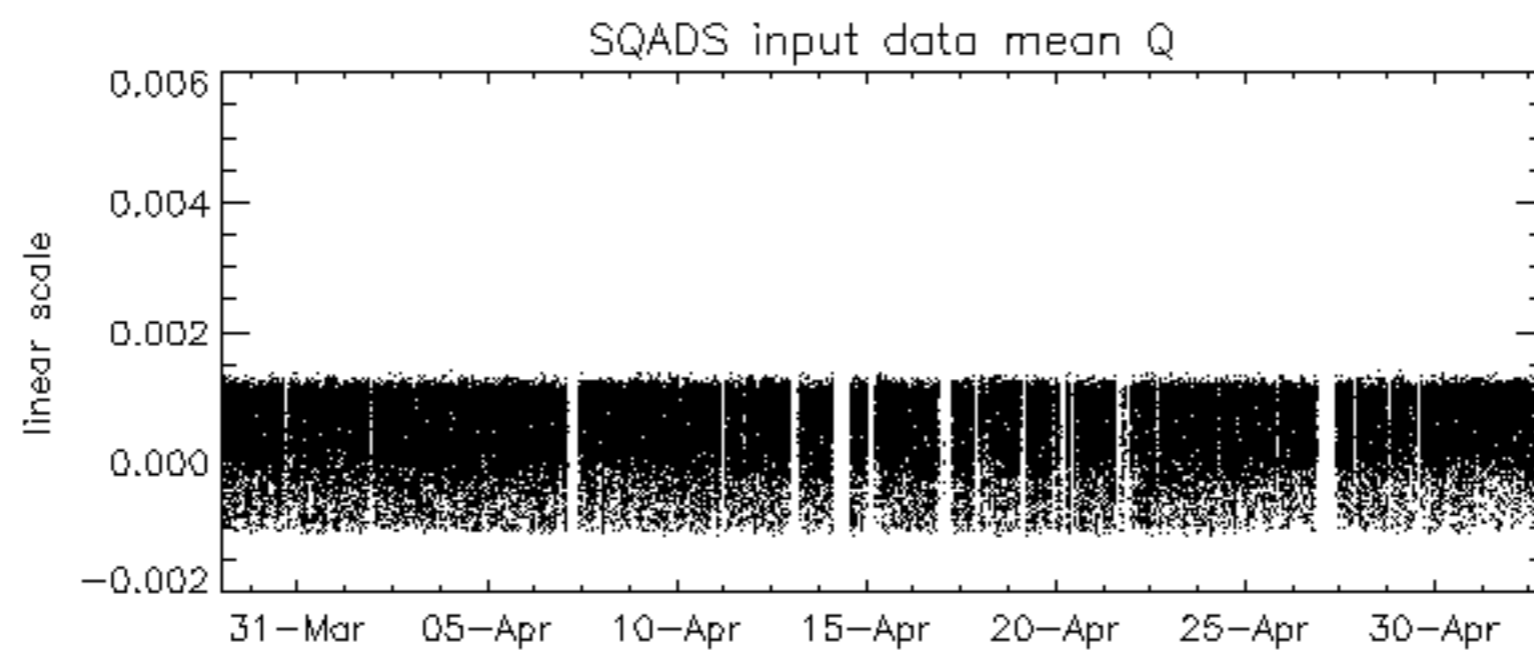
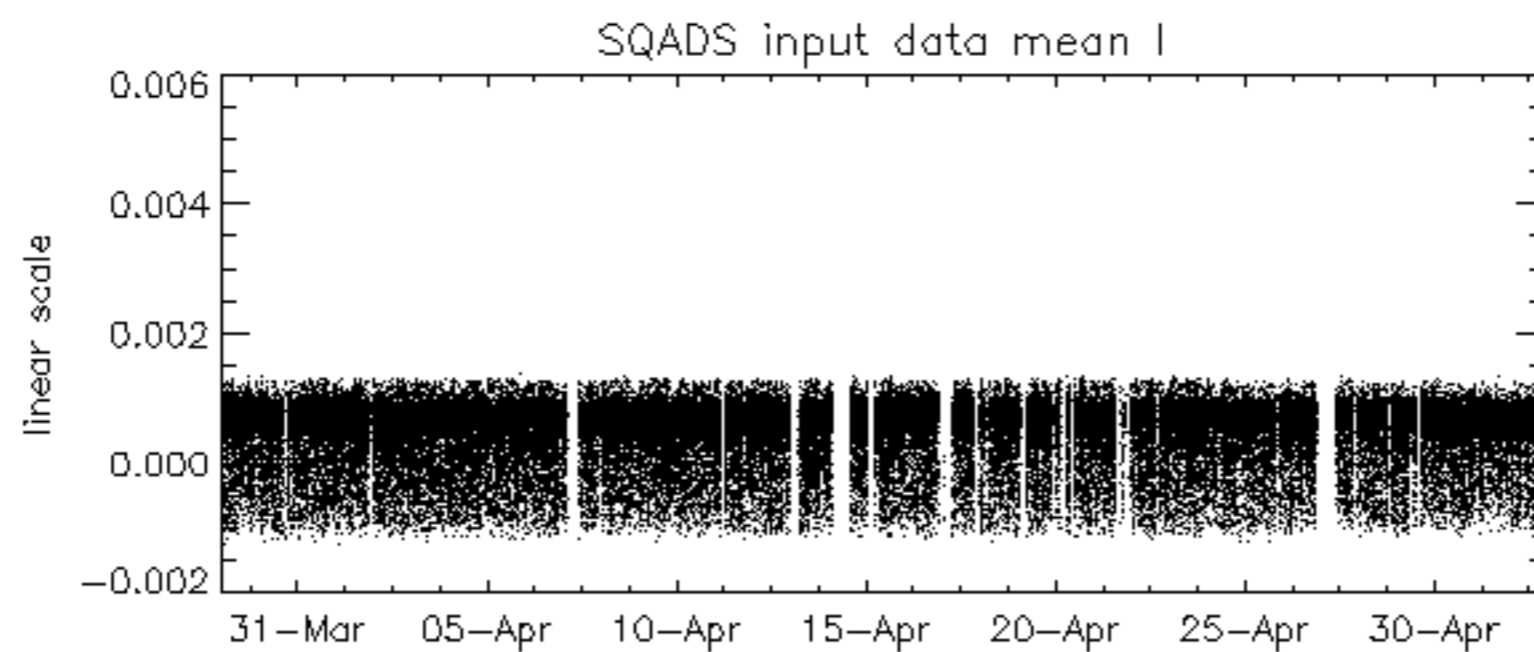
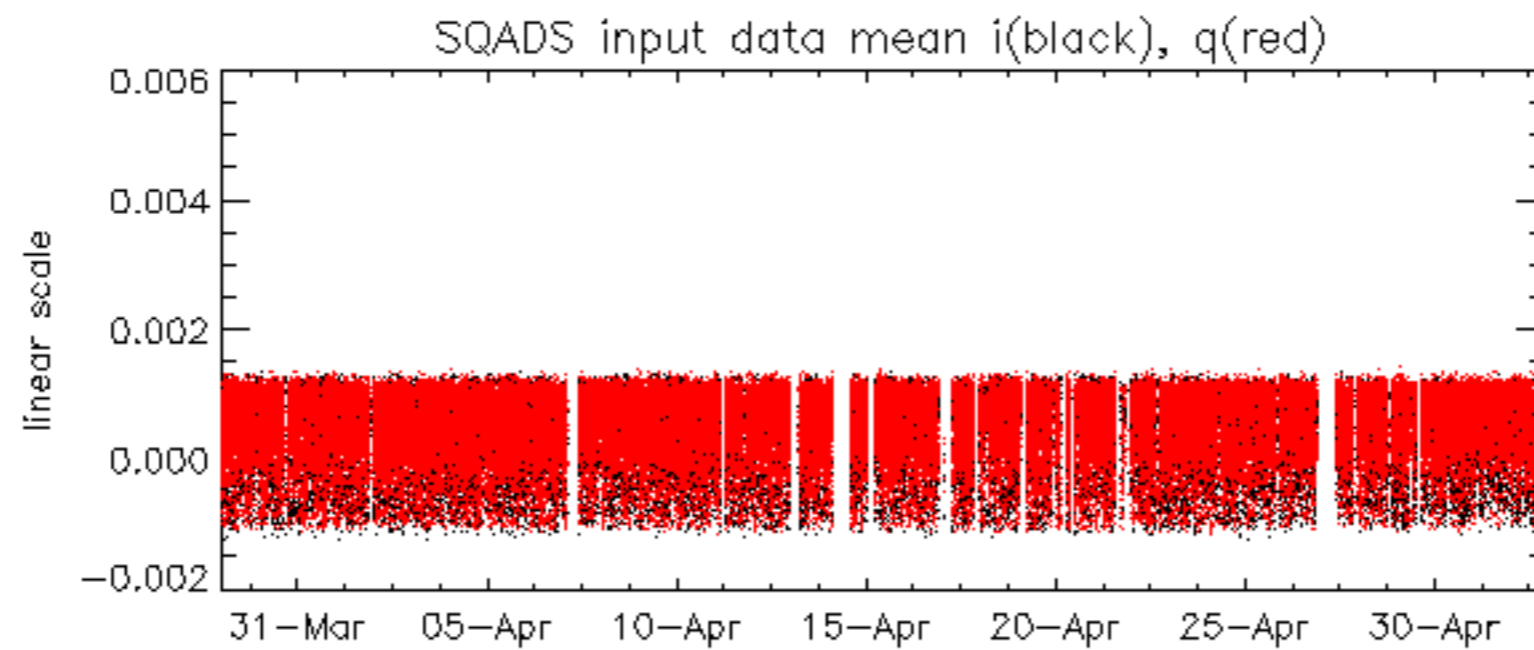


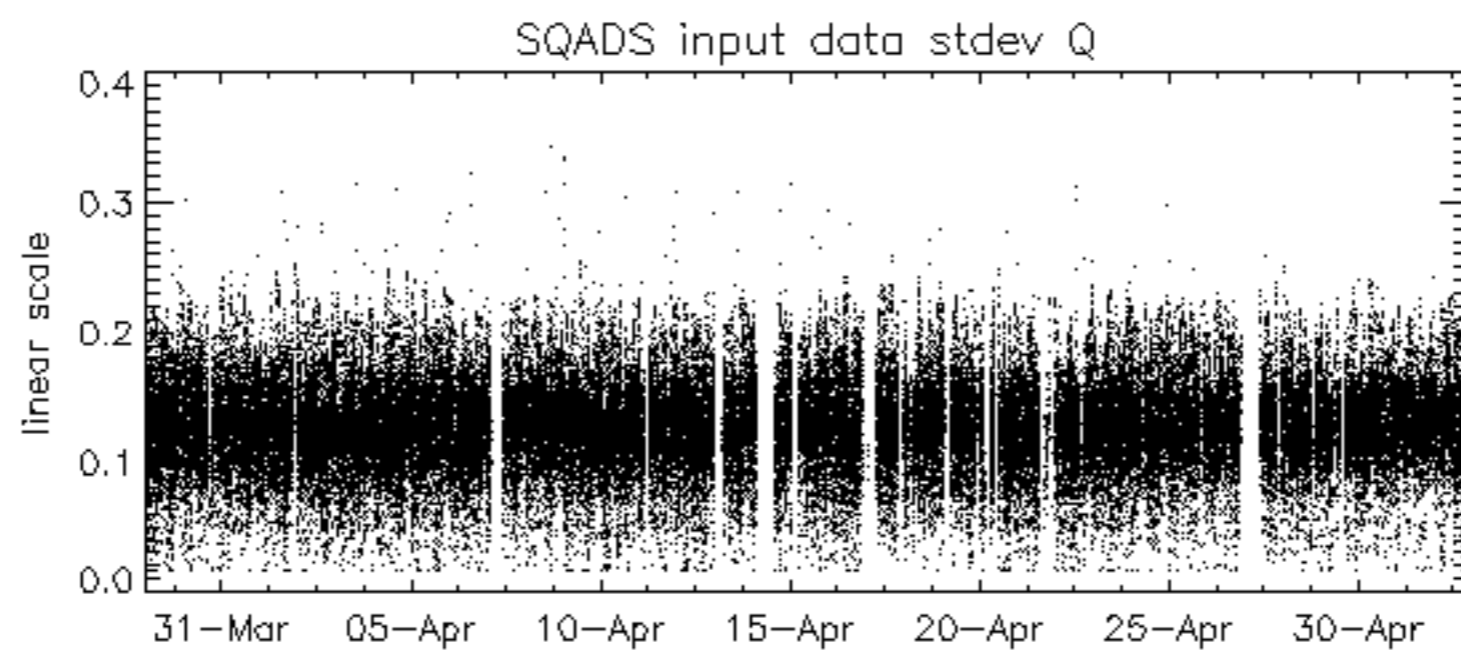
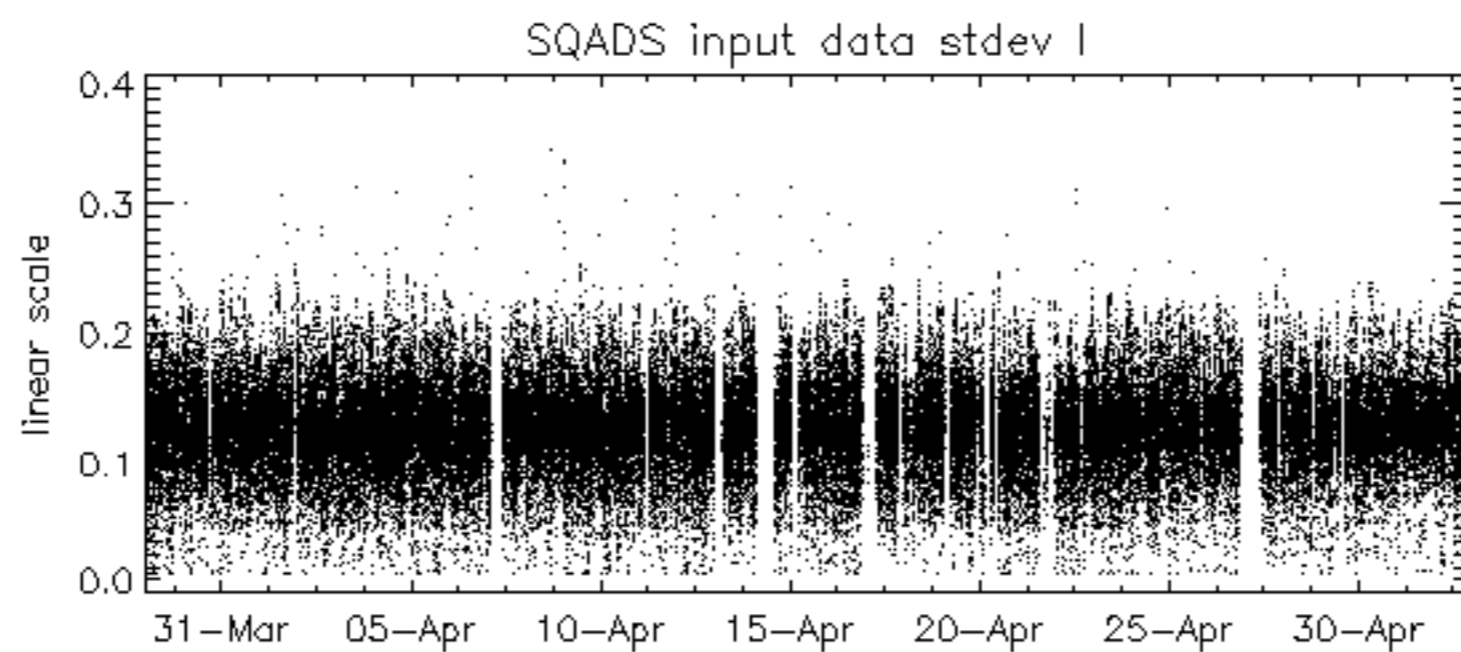
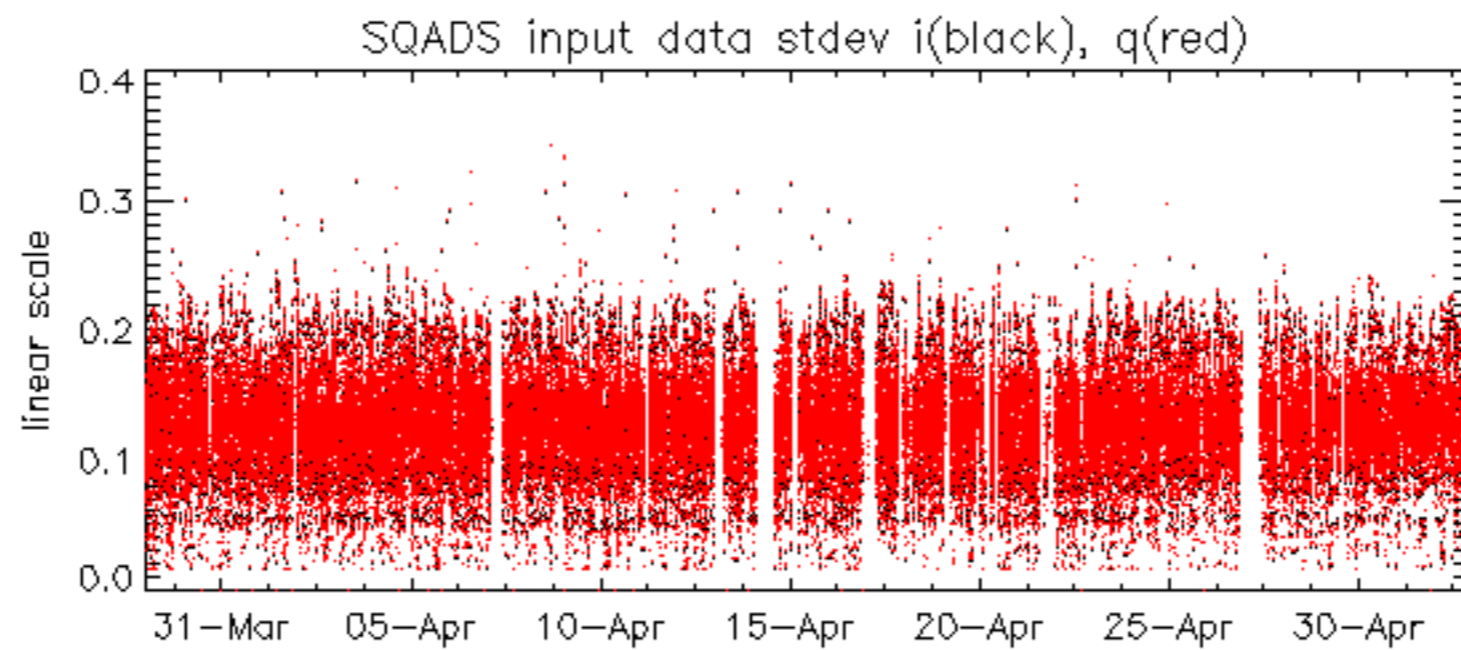
The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctioning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

No anomalies observed.









ASAR back in operation from heater/refuse due to all PSUs of tile C2 reported off.
Unavailable from 02-MAY-2004 21:32:47 to 03-MAY-2004 09:41:44

